# North Dakota Project Management Guidebook

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| Developed by: | ND Enterprise Project Management Advisory Group |

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# PREFACE

## Introduction

The North Dakota State Project Management Guidebook was developed through the North Dakota Enterprise Project Management (EPM) process[1], and was created to assist project managers in carrying out their duties. The Guidebook provides a common methodology for managing projects within state government. Although the Guidebook may look intimidating, it is designed to supply enough detail to guide new project managers through the project management process, while still being valuable for those more experienced in the field.

Individuals who use the Guidebook will find it to be both easy reading and enlightening. Through this living document, the community of project managers is allowed to share information such as lessons learned, process improvements, templates, samples, and more.

Use the Guidebook as a personal project management consultant. Let the Guidebook direct you on the path to project management enlightenment!

## Purpose

A common methodology encourages individual Project Managers across the state to approach each project endeavor with the same discipline and tools. Since the methodology is common to all business areas and across all agencies, state Project Managers moving to new opportunities within and among state agencies will have a reduced learning curve for project management. Roles and expectations are clearly defined for Project Team members, Project Sponsors, and Customers, regardless of the type of project (IT projects, software development projects, engineering projects, business process improvement projects, etc.). All project participants receive the same information regarding deliverables and activities throughout the project. This streamlines project execution, since participants will not need continual direction and education regarding the project management process.

The North Dakota State Project Management Guidebook, in combination with the new state procurement standards, also provides guidance for agency staff to use when contracting with private vendors. The state can

[1] EPM is the coordination of projects and the development of project management best practices for ND state government agencies (the enterprise), and was initiated in January of 2003 by the Enterprise Project Management (EPM) Advisory Group and the EPM Office (EPMO).

now provide the methodology for its contractors, rather than requiring North Dakota State staff to adjust to the different performance standards of each firm with whom they contract. Again, utilizing one common framework within which all North Dakota State projects can be carried out improves the state's ability to complete the projects successfully.

## Acknowledgements

Facilitated by the North Dakota State Enterprise Project Management Office (EPMO) in the Information Technology Department, the EPM Advisory Group developed the ND Project Management Guidebook collaboratively. The team, made up of state government and university Project Managers, modified the project management methodology developed by the State of New York Office for Information Technology. Generally accepted principles of project management were refined and incorporated into a project management lifecycle consistent with North Dakota State policies and practices.

At all times, the team worked to align the Guidebook with the *Project Management Institute's (PMI®) Guide to the Project Management Body of Knowledge (PMBOK®)*, the recognized ANSI standard for project management. A user group of over 50 individuals from various agencies participated in the review and critique of the methodology.

The State of North Dakota acknowledges the contributions, time commitments, and ongoing support of the following individuals and their agencies, to the development and ongoing support of the ***North Dakota Project Management Guidebook***.

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## Structure of the Guidebook

### The Project Management Lifecycle

The first and primary section, the Project Management Lifecycle, guides a Project Manager through the complete project management cycle of a project, detailing the specific processes to be performed within each phase and defining the tasks that comprise each process. The processes cover the most recognized project management knowledge areas in the profession today, adhering to the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) (see Appendix III for a listing of each process in the PMBOK).

Specific templates are provided to supplement the tasks and processes, including meeting agendas, deliverable templates, checklists, and forms. Tips and techniques for successfully performing the tasks/processes are offered, as are answers to "frequently asked questions". At the end of each phase, common pitfalls faced by Project Managers are described, along with solutions that could be used to successfully deal with those challenges. The hope is that a Project Manager will find useful direction for what to do, when to do it, and how to do it, no matter what stage of the lifecycle his/her project may be in.

### The Appendices

The Appendices provide the templates used throughout the Guidebook, a glossary of the project management used throughout the text, an outline of the standard project management processes defined by PMI, and a list of resources used in the compilation of this document.

## How to Use this Guidebook

The North Dakota Project Management Guidebook is intended to be both a "what to do" and a "how to do" guide for North Dakota State Government Higher Education Project Managers. While at first it may appear intimidating, remember that in many cases the Guidebook is merely formalizing what is already a fairly standard and generally accepted technique for project management.

The value of documenting and standardizing these processes is demonstrated when the Project Manager is freed from having to define a process to fit a particular situation and/or event occurring during his/her particular project. Instead, guidance is already there for the Project Manager to use to manage each process while continuing to focus on key project activities. Most processes and deliverables are required for all projects, although in smaller projects they may require less formality and a

lower level of effort. The End-of-Phase Checklists can be used to ensure that every process defined has been considered, necessary tasks addressed, and required deliverables produced. If recommended tasks or deliverables are skipped, make sure to identify and record why the particular task/deliverable has not been completed and how the objectives of that task/deliverable will otherwise be met.

**Symbols**

The compass icon  indicates a tip from an experienced Project Manager, while the life preserver icon  marks advice intended to save the project from pitfalls. The  icon marks a legislative mandate or state standard to be followed. The  icon indicates a standard for Higher Education.

**Templates**

The templates included in the guidebook contain instructions and comments facilitating their use. The templates can be downloaded from the EPM website at http://www.state.nd.us/epm for use and customization for your project.

Finally, use this Guidebook as a tool to help you manage the project. Don't let the process or the project manage you!

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**North Dakota Project Management Guidebook**

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## Registration Form

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# PROJECT MANAGEMENT LIFECYCLE

## Introduction

The project management lifecycle defines how to manage a project. It includes processes such as origination, initiation, planning, execution/control, and closeout. While no two projects are exactly alike, the project management lifecycle will always be the same, regardless of the project type. All projects should progress through these same five project management phases:

### Project Origination

In Project Origination an individual proposes a project to create a product or develop a service that can solve a problem or address a need in the Performing Organization. The Performing Organization then submits the proposal to an evaluation and selection process. If selected, a budget or further management commitment for the project may also be required before a Project Manager is actually assigned and the project is authorized to progress to Project Initiation. Depending upon the standards and practices of the Performing Organization, a time delay between the project's proposal and selection and its actual initiation may occur.

### Project Initiation

At the beginning of Project Initiation, a Project Manager is assigned. The Project Manager works with the Project Sponsor to identify the necessary resources and team members needed to further develop the key project parameters – Cost, Scope, Schedule, and Quality (CSSQ). The Project Team documents its charge in the form of a Project Charter, which is based on the Project Proposal and Business Case. Approval of the Project Charter by the Project Sponsor authorizes the designated team to begin Project Planning.

### Project Planning

Project Planning builds on the work done in Project Initiation, through the development of a Project Plan. The Project Plan defines CSSQ, and includes plans for involving and communicating with all the parties that are affected by the project, as well as identification of an initial set of foreseeable risks that can threaten the Project. Additional key elements included in the Project Plan are the change control process and externally focused items such as organizational change management and project transition plans.

At the conclusion of Project Planning, the Business Case is revised and re-evaluated based on the completed planning documents and a decision is again made to either halt the project, or to commit the resources necessary for Project Execution and Control.

**Project Execution and Control**

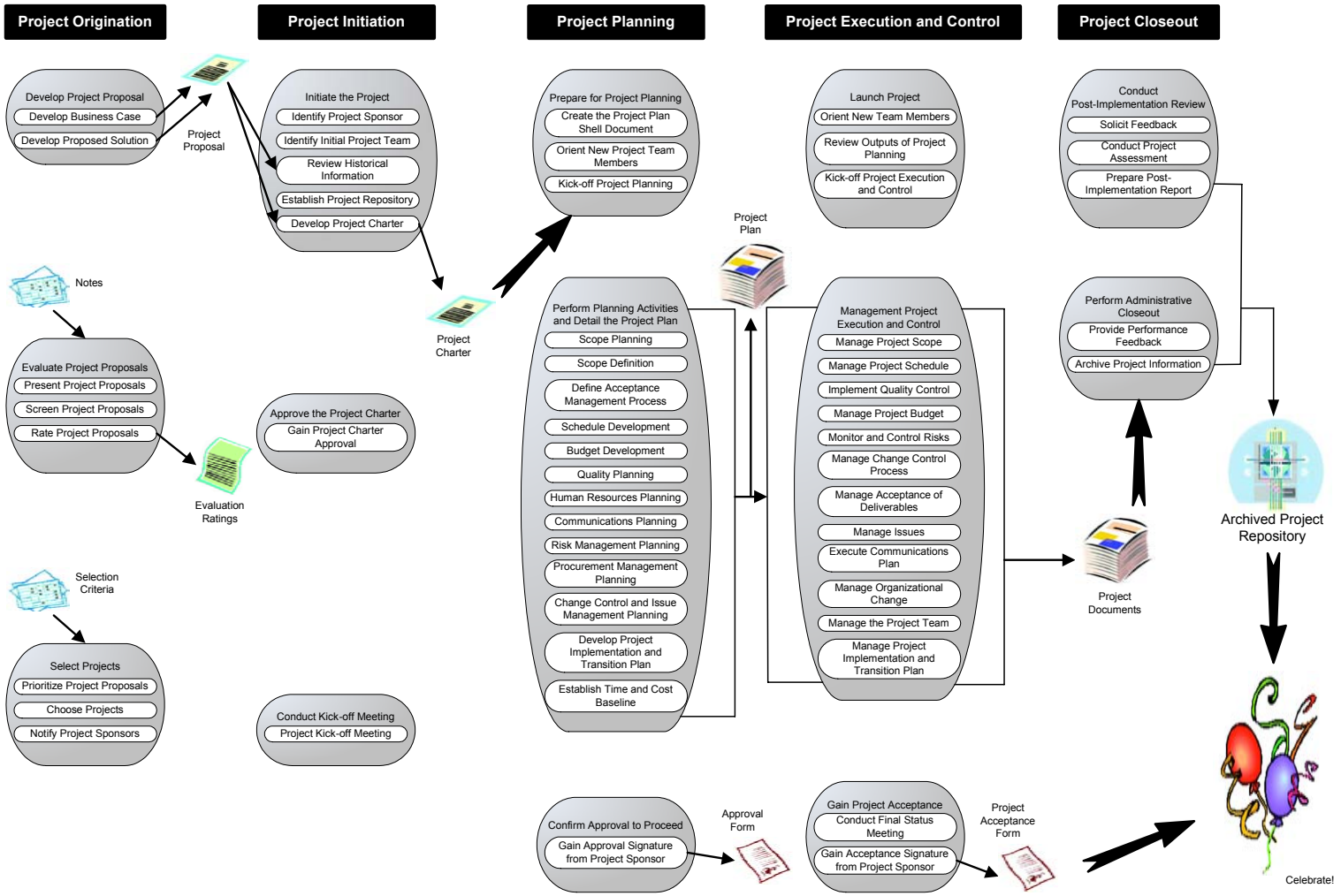
Project Execution and Control is where most of the resources are applied/expended on the project. A significant number of team members will join the project at the beginning of this phase. The primary task of the Project Manager during Project Execution and Control is to enable the Project Team to execute the tasks on the defined Project Schedule and develop the product or service the project is expected to deliver. The Project Manager uses the processes and plans prepared during Project Initiation and Project Planning to manage the project, while preparing the organization for the implementation of the product/service and for transitioning the product/service responsibility from the Project Team to the Performing Organization.

**Project Closeout**

In Project Closeout, the Project Team assesses the outcome of the project, as well as the performance of the Project Team and the Performing Agency. This is accomplished primarily through soliciting and evaluating feedback from Customers, Project Team members, Consumers and other stakeholders. The primary purpose of this assessment is to document best practices and lessons learned for use on future projects. Key project metrics are also captured to enable the Performing Organization to compare and evaluate performance measurements across projects.

**Figure 0-1 Project Management Lifecycle Diagram**

The following diagram illustrates every phase, process and task in the project management lifecycle.



## Stakeholder Roles and Responsibilities

Throughout this Guidebook, reference is made to specific roles that must be performed by stakeholders at various times throughout the project management lifecycle. **Stakeholders** are all of the people that are in any way affected by the new product or service. Since the organization will rely on various stakeholders prior to developing the project plan where roles and responsibilities are typically defined, it is important to understand the roles and responsibilities early in the process.

As you develop the project plan, you will determine the specific roles and responsibilities for stakeholders and team members in your project, which may vary from those identified below due to project size, scope, complexity, and the organizational structure of the agency/institution.

### Project Team

The **Project Team** is the group that is responsible for planning and executing the project. It consists of a Project Manager and a variable number of Project Team members, who are brought in to deliver their tasks according to the Project Schedule.

- The **Project Manager** is the person who is responsible for ensuring that the Project Team completes the project. The Project Manager develops the Project Plan with the team and manages the team's performance of project tasks. It is also the responsibility of the Project Manager to secure acceptance and approval of deliverables from the Project Sponsor and Stakeholders.
- The **Project Team Members** are responsible for executing tasks and producing deliverables as outlined in the Project Plan and directed by the Project Manager, at whatever level of effort or participation has been defined for them. On larger projects, some Project Team members may serve as Project Team Leaders (see below).
- The **Project Team Leaders**, sometimes called Business or Technical Team Leads, have the same responsibilities as Team Members, but also assist the project manager in providing leadership for, and managing the team's performance of, various tasks.

NOTE: Throughout this Guidebook, when Project Team Members are listed as a resource for a particular task, it should be assumed that Project Team Leaders are included.

## Project Sponsor

The **Project Sponsor** has a demonstrable interest in the outcome of the project and who is responsible for securing spending authority and resources for the project. Ideally, the Project Sponsor should have full authority to make all decisions necessary to assure completion of the project, including decisions to increase the project scope and budget.

The Project Sponsor initiates the Project Proposal process, champions the project in the Performing Organization, and is the ultimate decision-maker for the project. The Project Sponsor provides support for the Project Manager, approves major deliverables, and signs off on approvals to proceed to each succeeding project phase. The Project Sponsor may elect to delegate any of the above responsibilities to other personnel either on or outside the Project Team.

- The Project Sponsor is commonly an active participant with **Project Steering Committee**, which is a larger management team providing guidance and support to the Project Manager. On larger projects, there may be various levels of Project Steering Committees.

NOTE: Throughout this Guidebook, when the Project Sponsor is listed as a resource for a particular task, the Project Steering Committee can be assumed as included (when used).

## Performing Organization Management (POM)

The **Performing Organization Management (POM)** includes all members of the organization's management team that may exert influence on Project Team members or be affected by and involved in the development and implementation of the product of the project. The committees that are formed to evaluate and select proposed projects for the Performing Organization are comprised of members of the Performing Organization Management.

- The **Project Proposal Team** is a group responsible for preparing the Project Proposal in the Origination phase; the Project Sponsor organizes it.

- The **Project Selection Committee** comprises members of the Performing Organization Management team who meet on a regular basis to evaluate Project Proposals and select projects for initiation. They maintain the Project Proposal rating models and project selection criteria.

## Customers

The **Customers** comprise the business units that identified the need for the product or service the project will develop. Customers can be at all levels of an organization, from Executive Director/President to entry-level clerk. Since it is frequently not feasible for all the Customers to be directly involved in the project, the following roles are identified:

- **Customer Representatives** are members of the Customer community who are identified and made available to the project for their subject matter expertise (sometimes called subject matter experts or SME's). Their responsibility is to accurately represent their business units' needs to the Project Team, and to validate the deliverables that describe the product or service that the project will produce. Customer Representatives are also expected to bring back to the Customer community the information about the project. Towards the end of the project, Customer Representatives will test the product or service the project is developing, using and evaluating it while providing feedback to the Project Team.
- **Customer Decision-Makers** are those members of the Customer community who have been designated to make project decisions on behalf of major business units that will use, or will be affected by, the product or service the project will deliver. Customer Decision-Makers are members of the POM responsible for achieving consensus of their business unit on project issues and outputs, and communicating it to the Project Team. They attend project meetings as requested by the Project Manager, review and approve process deliverables, and provide subject matter expertise to the Project Team. On some projects, they may also serve as Customer Representatives.

## Vendors

**Vendors** are contracted to provide additional products or services the project will require and may be members of the Project Team.

### Consumers

The Consumers include all the people that will use the product or service that the project is developing. Consumers internal to the Performing Organizations may also be Customers.

### External Stakeholders

If the performing organization is within North Dakota State Government or Higher Education, this group may include other agencies, the State Legislature (specifically the Interim IT Committee), the State Information Technology Advisory Committee (SITAC), the media, students, and the citizens and businesses of North Dakota.

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# Chapter 1 - Project Origination

## Purpose

The purpose of Project Origination is to evaluate projects proposed for the next planning cycle and to reach a consensus on the projects to be selected. During this phase, the strength of a project's Business Case is tested, and the viability of the Proposed Solution is explored. A determination is made as to whether the project is consistent with the agency's strategic plan and affordable within budget guidelines.

Selecting the wrong project is a very costly, and sometimes devastating mistake that many organizations make. Even a great idea may not be worth expending the resources or accepting the associated risk. Or the project may simply need to be delayed until more resources are available or the associated risk can be mitigated.

Selecting the right projects in the wrong combination and, therefore, overextending the organization's resources can be just as devastating. It is not always easy to see why good Project Origination procedures, resulting in a well thought out selection of projects, are so critical to the success of the Performing Organization.

If your agency's Project Proposal process is established and the information in this chapter does not apply, it is still critical to follow the steps for developing a strong Business Case and Proposed Solution.

The Project Proposal process may actually be part of the budget cycle, serving as the justification for budget requests. In this case, Project Proposals may need to be created a full budget cycle prior to the project's anticipated initiation. Other factors that impact Project Origination include statutory requirements, regulations, legislative restrictions, and civil service rules.

As mentioned above, the Project Proposal process may be part of the budget cycle, therefore it is important to understand your budget planning, development, and approval process, including how the State Legislature appropriates funds.

Each organization has its own approach to green-lighting desired projects. The approach outlined below is only one of many possible variations of the evaluation and selection process. There are some general principles, however, that apply to any effective evaluation and selection process:

- The deciding body must have enough information about the merits of the project's Business Case and the viability of its Proposed Solution to make a meaningful evaluation;
- The competing projects' merits must be evaluated and compared using a consistently applied methodology;
- The selection process must take into consideration the project's fit with the organizational mission and strategic plan.

## List of Processes

The three major processes in this phase of the project management lifecycle are:

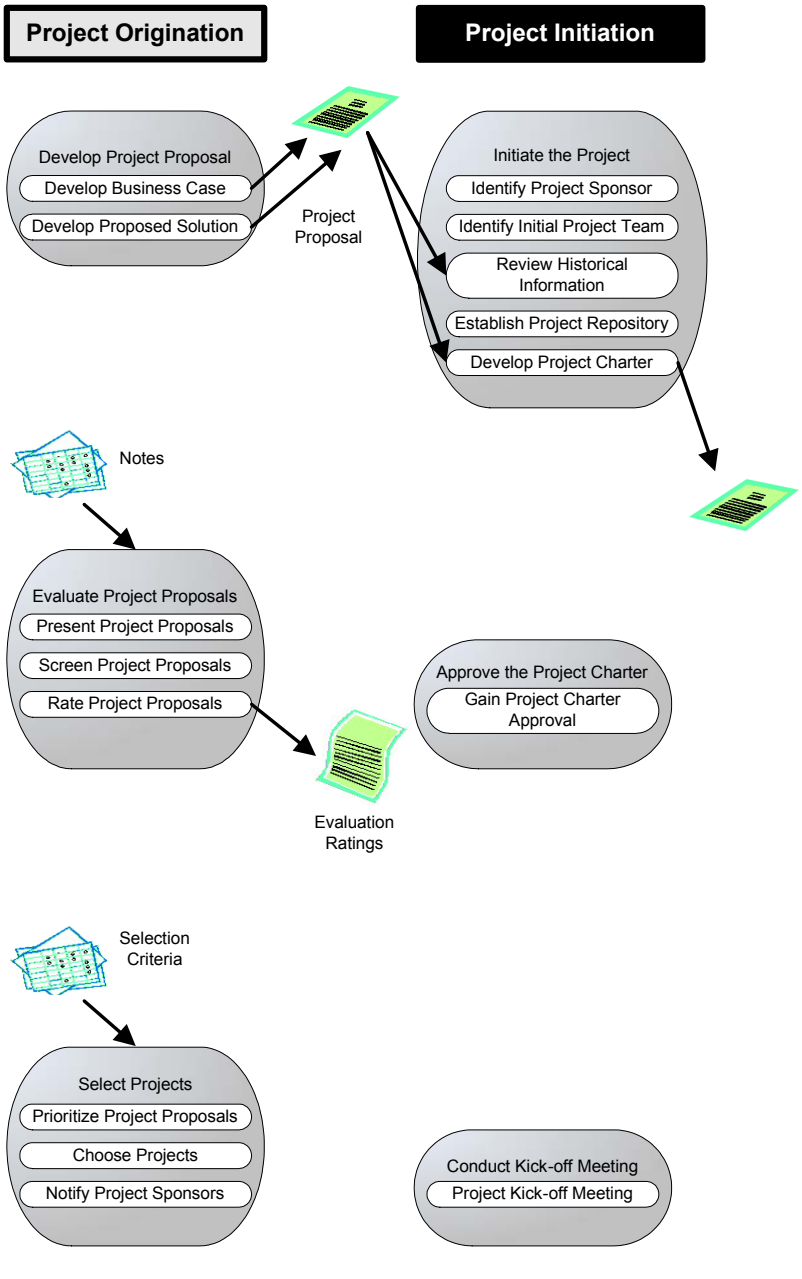
**1.1 Develop Project Proposal**, where the initial Business Case is made, and initial project parameters are defined;

**1.2 Evaluate Project Proposals**, where cost/benefit analysis is performed, and the projects are evaluated against a set of specific business criteria; and

**1.3 Select Projects**, where a consensus is reached on the project's feasibility and relative importance in comparison to other proposed projects, and a decision is formally made regarding the Project Proposal.

The following chart illustrates all of the processes, tasks, and deliverables of this phase in the context of the project management lifecycle.

**Figure 1-1 Project Origination in the Project Management Lifecycle**



## List of Roles

The following roles are involved in carrying out the processes of this phase. The detailed descriptions of these roles can be found in the Preface.

- ❑ Project Sponsor
- ❑ Project Proposal Team
- ❑ Project Selection Committee

## List of Deliverables

Since a Project Manager is not assigned to the project until the Initiation Phase, members of the Performing Organization Management are responsible for preparing and reviewing Project Origination deliverables.

Figure 1-2 lists all Project Origination tasks and their deliverables. A deliverable is a measurable, tangible, verifiable product. The items in italics are *outcomes*, which are more similar to results versus tangible deliverables.

**Figure 1-2 Project Origination Deliverables**

| Processes | Tasks | Deliverables and *Outcomes* |
|---|---|---|
| Develop Project Proposal | Develop Business Case | Business Case |
| | Develop Proposed Solution | Proposed Solution |
| Evaluate Project Proposals | Present Project Proposal | *Project Proposal Understanding* |
| | Screen Project Proposals | *Proposals Removed from Further Consideration* |
| | Rate Project Proposals | Evaluation Ratings |
| Select Projects | Prioritize Project Proposals | *Prioritized Proposals* |
| | Choose Projects | *Selected Projects* |
| | Notify Project Sponsor | Proposal Decision Notice |


Sometimes it is necessary for a project manager to be involved at this early stage of the project. If this occurs, and you are the project manager in this case, take extra measures to ensure that members of the Performing Organization Management are still heavily involved. Without their strong support of the origination of a project, the project can be doomed to problems before it even begins.

## 1.1 Develop Project Proposal

### Purpose

**Roles for this Step**
Project Sponsor
Project Proposal Team

Before a project can be selected for initiation, a persuasive case must be made for its viability, given current organizational priorities. In **Develop Project** Proposal, the initial Business Case for the project is formulated, and all information required for project selection is formalized in the Proposed Solution. A proposal for a project may come from any place in the Performing Organization, but someone must be identified as the "owner" of the proposal, and must serve as Project Sponsor, at least through the evaluation and selection process. The Project Sponsor may be in executive management, in a specific functional program area, or a representative of the Customers or the Consumers within the Performing Organization.


Since information from the Business Case is included in the Proposed Solution – and vice versa – the tasks to develop those documents should be performed not consecutively, but concurrently, with one document informing and influencing the other.

### Tasks

#### 1.1.1 Develop Business Case

**Tasks for this Step**
Develop Business Case
Develop Proposed Solution

The Business Case is one of the defining documents of the project, providing information necessary to support the decision to launch the project at the end of Project Origination and to continue the

project in subsequent phases. The Business Case must identify an existing business need and lay the foundation for developing a potential solution to meet that need. The cost of implementing the solution must be estimated and compared to the benefits gained, and justification for the potential project should also depend on whether the project is consistent with the organization's mission. For a sample Business Case template, (see Appendix I / Template A - Project Business Case Template).

The Business Case must provide a compelling case for the project. A careful study should be made of expected benefits to the organization implementing the project. An analysis of the costs, benefits and risks associated with the proposed approach can be made, and the justification necessary to obtain the proper level of commitment from the decision-maker(s) can be formulated.

The Business Case can also identify special funding sources available for the proposed initiative, and should align the project's costs with the agency budget cycle. If the project is going to span multiple budget cycles, a multi-year strategy for project funding should be discussed with the agency fiscal officer, who may find it useful to review the Business Case with another constituency.

 During Project Origination, any estimates are acknowledged to be high-level at best. As the project progresses through the Initiation and Planning phases, those estimates will become more precise as more is learned about the true parameters of the project, and additional go/no go decisions will be made based on the latest information. It is also important to note that, in order to define project parameters with adequate precision, Initiation and Planning will require substantial resources, and initial estimates should reflect that fact.

It may be advisable to include whether the project is required as a result of federal or state legislative action, gubernatorial or executive mandates, or agency program priorities.

Before presenting the proposal for evaluation, the Project Sponsor should have the Business Case reviewed by the people most intimately familiar with its imperatives – Customer Decision-Makers.

The Business Case will continue to be a critical component of the decision-making process throughout the entire project management lifecycle – from the initial decision to proceed with the project to the

decisions made at periodic project reviews to continue, modify or terminate the project. At the end of each project management phase and whenever there is a significant change to the project or the business function, the Business Case will be reviewed and re-validated.

 **Additional Business Case Requirements for Large Projects:** Pursuant to ND Century Code 54-35-15.2 and STD009-98, large information technology projects must submit a copy of the Project Business Case to the ITD Policy and Planning Division. A large information technology project is defined in NDCC 54-35-15.2 as follows: "a project with a cost of two hundred fifty thousand dollars or more in one biennium or a total cost of five hundred thousand dollars or more." For more information, refer to the ITD web site at http://www.state.nd.us/itd/planning/lar-pro-rep.html.

### 1.1.2 Develop Proposed Solution

A Proposed Solution includes a summary of the business need (abstracted from the Business Case) and a definition of the optimal solution to address that need.

The Proposed Solution should include an evaluation of all alternatives considered, and a justification of the solution selected. The basis of time and cost estimates for the Proposed Solution (expert judgment, availability of historical data on similar projects, Request For Information (RFI) responses, etc.), as well as the accuracy of the estimates (+/- 100%, +/- 50%, etc.), should be documented.

For a sample Proposed Solution template, see Appendix I / Template B - Proposed Solution Template.

 If the Performing Organization uses standard evaluation forms/ formats, the Proposed Solution may include a "self-assessment" performed by the Project Sponsor or the Project Proposal Team. Such a self-assessment may assist the Project Sponsor to realize weaknesses in the proposal before formal submission for evaluation and selection.

The completed Proposed Solution is combined with the Business Case to complete the Project Proposal, which will be presented to the project evaluation and selection process.

 It is highly advisable to have an independent party verify the Proposed Solution and associated estimates.

## 1.2 Evaluate Project Proposals

**Roles for this Step**

Project Sponsor

Project Selection Committee

### Purpose

Many organizations generate multiple proposals for various new initiatives on a continuing basis; however, budgetary and other constraints allow only a fraction of those efforts to occur. Choosing the right projects, which support the organization's mission and assist with the implementation of its strategic plan, becomes a crucial activity, starting with an objective evaluation of proposed initiatives.

**Evaluate Project Proposals** presents an approach to rating competing proposals in a methodical, impartial fashion; the results are indispensable to the success of the subsequent project selection process. Organizations may implement this process in a variety of ways – from relying on unilateral decisions of a chief executive or designee, to convening cross-functional deliberative councils. The tasks presented below are designed to illustrate the components of an effective proposal screening and evaluation process, and not to prescribe a particular format required to reach a desired objective.

The frequency of an organization's evaluation/selection process may be dictated by many factors, including the size of the proposed projects, the variances of the budget cycle, and the occurrence of external mandates and internal imperatives.

**State Information Technology Advisory Committee (SITAC) Project Prioritization Process**: The SITAC is a committee in state government comprised of agency directors, private sector IT leaders, and legislators, with responsibility to prioritize major IT projects prior to inclusion in the Executive Budget.

**Higher Education Project Approval Process**: The approvals required for IT and related technology projects differ for Higher Education than for State Government. Depending on scope and cost of the project, approvals may be required beyond the department and Vice President at an institution. It may require approval from the campus CIO and the institution's Cabinet, NDUS CIO, one or more of the senior Councils, NDUS Cabinet, State Board of Higher Education, and Legislature. Additionally, the IT and related technology projects should have been included in the institution's strategic IT plan.

## Tasks

### 1.2.1 Present Project Proposals

| **Tasks for this Step** |
|---|
| Present Project Proposals |
| Screen Project Proposals |
| Rate Project Proposals |

Because the quality and level of detail among typical Project Proposals tends to vary a great deal, it is beneficial to allow the Project Sponsor to make a case for the project in person. This also allows decision-makers to ask questions and gather additional information on the spot, without resorting to more formal – and slower – channels of communication.

The presentation should be based on the Proposed Solution and the Business Case, but it can take many forms – from a formal slide presentation to an informal run-through of existing material. The objective is to allow the decision-makers to interact with those who best understand the business reasons for the initiative, and it's Proposed Solution.

### 1.2.2 Screen Project Proposals

Before a great deal of effort is expended on rating, prioritizing and selecting presented projects, it may be useful to screen competing proposals by asking some important questions, such as:

- Does the project support the organization's mission?
- Does the Proposed Solution align with the organization's strategic plan/technical architecture?
- Is there an available/plausible funding source for this effort?

- ❑ Does the project's cost/benefit analysis justify its initiation? Furthermore, what additional benefits other than cost savings, can justify the project's initiation?

Unless a project is legislatively (or otherwise) mandated, simply working through these questions will result in elimination of some proposals from further consideration. The Project Sponsor should be notified, and the decision should be documented on the Proposal Decision Notice form (see Appendix I / Template D).

### 1.2.3 Rate Project Proposals

Rating of Project Proposals is generally performed by executive management or by a group designated by executive management (Project Selection Committee). The group may meet on a regular or an as-needed basis to perform this function, or the rating of proposals may be an integral part of the organizational strategic/tactical planning and budgeting process.

The process is usually formal, with specific forms/formats and procedures. In smaller organizations, however, it may be more informal, and may even be combined with the selection process. In these cases, a brief presentation to the Commissioner, Director, or other organization head may be all that is required to commit resources (funding, personnel, equipment, etc.) and initiate the project.

Proposals are generally rated according to a set of specific business criteria. The process may include a broad technical review to determine if the proposal follows current agency standards and technical architectures. The funding associated with a project is also a critical component of the rating process. A Performing Organization may have unique rules regarding funding for proposals. During Project Origination, the Project Sponsor must identify whether funds are expected from the Performing Organization's current/future operating budget, or whether additional funding sources are available.

The level of approvals needed may vary depending on whether the project exceeds or falls below defined thresholds. Thresholds may be based on cost, involvement of more than one functional area, project needs within or outside of standards and procedures, or other areas specific to the Performing Organization. The rating process generally assigns a score to each project, to inform the selection process. See Appendix I / Template C, for the Project Ranking Matrix. This matrix is required for large projects requiring SITAC review, but may also be used internally for smaller projects that do not require large project oversight.

## 1.3 Select Projects

**Purpose**

Once the Project Proposals have been uniformly and objectively rated, it is necessary to prioritize them to reflect how they compare to one another in various aspects, including supporting current organizational priorities, the mission and the strategic plan. At that point in the **Select Projects** process, a decision can be made as to how many of the top-rated proposals can be accommodated by the agency's budget, resources, and ability to absorb organizational change. Whether the project is approved, declined, or sent back for additional information, the Project Sponsor must be notified, and the decision documented.

**Roles for this Step**

Project Sponsor

Project Selection Committee

**Tasks**

### 1.3.1 Prioritize Project Proposals

Quantitative ratings derived through the evaluation process make the prioritization process a simple matter of sorting the higher scores to the top. However, it may be useful to review the generic rating criteria once again and decide if some additional measurements are needed. Complying with legislative mandates or executive chamber initiatives, for example, may trump even well conceived process improvement opportunities.

**Tasks for this Step**

Prioritize Project Proposals

Choose Projects

Notify Project Sponsors
&
Project Selection Committee

These are the factors evaluated to determine a project's feasibility and its relative importance in comparison to other proposed projects. Whatever the final set of criteria, they should be documented and applied equally to each competing proposal, to enable a fair and competent selection process.

### 1.3.2 Choose Projects

A committee of executives from the Performing Organization usually makes project selection decisions. Even if the Commissioner or other agency head (Chairman, Director, etc.) makes the final decision, a

Project Selection Committee generally reviews and develops recommendations. It may be useful to, once again, invite the Project Sponsor to make a presentation to the Committee and answer questions.

The Project Selection Committee must choose projects that, in combination, will provide the best investment for the Performing Organization. The Committee considers competing priorities in determining what is best for the whole. All proposals must be evaluated in the context of other proposals, current projects and ongoing operations in order to set priorities and determine resource availability. This process may be accomplished through discussion and vote, or the Committee may use specific tools (software, spreadsheets, etc.) designed to facilitate comparison of the proposals.

The projects chosen as a result of this process may not necessarily reflect what is best for an individual employee or a single work unit. Sometimes a lower-priority project will be approved simply because it is low-risk or low-cost, and can deliver needed benefits or services. Sometimes a project can be undertaken because it needs few resources, and can be performed while larger initiatives are delayed. Projects may be approved for immediate action or with a delay for obtaining resources. It is also possible that a proposal could be returned to the Project Sponsor for further development without approval or rejection.

Choosing a project does not necessarily guarantee that the project will be undertaken by the Performing Organization. That is generally dependent upon the availability of necessary funding. Each Performing Organization may have a different process whereby chosen projects are actually authorized to proceed to Project Initiation.

### 1.3.3 Notify Project Sponsors

Once the decisions have been made, it is imperative to document them and to explain their rationale to the Project Sponsors and other Stakeholders. One of three outcomes can occur:

1. A decision is made to proceed with the project. In this case, a determination must be made when Project Initiation can begin. At that point a Project Manager must be assigned to the project. The finance office must be brought on board to ensure adequate funding for the project, and control agencies may be notified that the project is being initiated.
2. A decision cannot be made on the project without some additional information. In this case, the specific information required for an informed decision should be documented, and communicated to the

Project Sponsor, along with some guidelines for submitting the proposal again in the next evaluation/selection cycle.

3. A decision is made to decline the proposal. In this case, a detailed explanation for the decision should accompany the message, outlining where the proposal came up short in the screening, evaluation, prioritization and/or selection. In all three cases, the same Proposal Decision Notice can be used to document and communicate the decision (See Appendix I / Template D).

## Project Origination End-of-Phase Checklist

**How to Use:** Use this checklist throughout Project Origination to help ensure that all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

**Figure 1-3 Project Origination End-of-Phase Checklist**

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| **Develop Project Proposal:** | | |
| Formulate business need/ problem and anticipated benefits to all parties | | |
| Review project's fit with organization's mission | | |
| Identify project objectives | | |
| Research potential approaches and solutions | | |
| Identify and recommend one (or more) chosen solution(s) | | |
| Review solution's fit with organization's strategic plan | | |
| Estimate costs of all resources and materials required for the project, both initial and recurring | | |
| Identify potential project risks | | |
| Identify organizational impacts of the project | | |
| Identify any legislative, regulatory or policy dependencies or implications of the project | | |
| Perform project cost/benefit analysis | | |
| Identify project funding strategies | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Complete Business Case and Proposed Solution forms | | |
| Submit a copy of the Business Case to ITD Policy & Planning | | |
| **Evaluate Project Proposals:** | | |
| Submit Project Proposal to the Selection process | | |
| Schedule and conduct proposal presentation | | |
| Identify and/or utilize proposal screening criteria | | |
| Identify and/or utilize proposal rating criteria and methods | | |
| **Select Projects:** | | |
| Identify and/or utilize proposal prioritization criteria | | |
| Evaluate projects' requirements vs. organizational capacity | | |
| Recommend projects for selection | | |
| Choose projects for initiation | | |
| Notify Project Sponsor of unfavorable screening outcome | | |
| Document decision process and outcome for each proposal | | |
| Complete Proposal Decision Notice forms | | |
| Get signatures from Project Selection Committee members | | |
| Notify Project Sponsor(s) | | |

## Measurements of Success

Success in Project Origination is not only receiving permission to proceed on the proposed project, but also understanding the executive decision, which often results in a greater understanding of the organization's mission.

During Project Origination, certain assumptions and projections are made regarding the main project parameters – cost, benefit, scope, and timeframe. These initial estimates are used to rate the project under consideration against all other competing initiatives. The main measurement of success for Project Origination is the consensus of the Performing Organization Management that the projects were weighed fairly, and that the ones with the most compelling Business Case received a green light.

Before the final project selection, it is possible to assess how successfully the evaluation process is proceeding by utilizing the measurements outlined below. More than one "No" answer indicates a serious risk to the desired consensus described above.

**Figure 1-4 - Checklist for Measuring the Success of Project Origination**

| Process | Measurements of Success | Yes | No |
|---|---|---|---|
| Develop Project Proposal | Have the anticipated benefits been reviewed and accepted by the Customer? | | |
| | Does the expected outcome of the project support the organization's mission? | | |
| | Does the Proposed Solution address only the agenda described by the business problem? | | |
| | Has an independent party assessed the estimated costs and resources? | | |
| | Does the Project Proposal make clear how various approaches/solutions were considered and evaluated, and why a particular solution is being proposed? | | |
| Evaluate Project Proposals | Was the project rated on all of the following:<br>• Strategic alignment?<br>• Risk?<br>• Proposed Solution?<br>• Cost?<br>• Benefit?<br>• Funding? | | |
| | Were the evaluation criteria applied equally to all projects under consideration? | | |
| Select Projects | Does the Project Proposal Team understand the reasons for the project's approval or declination, or for additional information that is required? | | |
| | Is there a consensus among the Performing Organization Management that the selection process was objective and fair? | | |

## Phase Risks / Ways to Avoid Pitfalls

It is not always easy to see why good Project Origination procedures, resulting in a well thought out selection of projects, are so critical to the success of the Performing Organization. Hopefully, now that you have read this section, it is easy for you to understand and you can help others see the light!

What are some of the key elements of Project Origination that require the most attention? The following table identifies processes and tasks that are highlighted in this section.

**Figure 1-5 Importance of Project Origination Process - Avoiding Pitfalls**

| Process | Task | Why is it Important? |
|---|---|---|
| Develop Project Proposal | Develop Business Case | This document is the basis of the project's acceptance or rejection not only in this phase, but throughout the rest of the project lifecycle. |
| | Develop Proposed Solution | Having the proposed solution approved before launching into project activities protects the project team, the project, and the whole organization from anarchy. |
| Select Projects | Choose Projects | Selection of the projects with the greatest value and greatest chance for success is key to the success of any organization. |

### Pitfall #1 – IT'S NOT THAT EXPENSIVE, LET'S DO IT!

A high-level cost/benefit analysis must be included in your proposal. It might initially appear that a wonderful benefit to your employees is to supply donuts every day. It might build morale. It might increase their energy levels from the sugar high. However, what are the costs? Good donuts cost money. Could agency funds be expended elsewhere for greater benefit? Is there a less distracting morale builder? There may be decreased productivity as the post-sugar slump hits. Should fresh fruit be considered instead? Cleaning costs might increase as crumb trails cover the floors. You might need to hire pest control as

the ants and mice move in. Should the idea of an agency-provided snack be vetoed, as the outcome would actually be more of a problem than it is a benefit?

Your proposal must clearly show that you have at least considered the cons as well as the pros. It must show that you have examined the costs as well as the benefits. It must exhibit that you've considered the long-term ramifications as well as the short-term gains.

**Pitfall #2 – CHICKEN BEFORE EGG, INITIATION BEFORE APPROVAL**

It's very tempting to get the project started before you get final approval as a way of showing management what a great idea it is. ("I'll show them what a good idea this is and they won't be able to say no!") For novice Project Managers, and for organizations first implementing a formal methodology, it may be very easy to go too far into Project Initiation and Project Planning while you create the proposal for the project. ("Once we expend the resources to do the planning, it doesn't even make sense to turn down the Project Proposal.")

Moving into Project Initiation and Project Planning before the project has received approval through the project selection process can lead to wasted time and resources, especially if the project is not ultimately approved. If this is done repeatedly, it could lead to a loss of trust in those involved – the originator of the proposal as well as the selection committee and the Project Sponsor. A delicate balance must be maintained between providing enough information to adequately support your Project Proposal and expending too much time and effort (read "expense") at this phase. But don't ever throw anything out! If you accidentally gather more information than you need, save it for Project Initiation and Planning after your proposal IS approved.

**Pitfall #3 – ONE PLUS ONE DOES NOT EQUAL TWO**

Selecting the proper combination of projects to be worked on simultaneously within an organization is often a delicate balancing act. If Project A is going to take six months, and Project B is going to take eight months, you cannot conclude that working on the two projects simultaneously means they will both be done at the end of eight months. Both projects may require the same resource during the first two months. Even if both projects are very high priority, it may make more sense to delay the start of one for several months to allow resources to concentrate in one place. The outcome may very well be that more total work can be accomplished.

For example, if you have one staff person doing a task in two different cities that requires three days each, she can get both tasks done in 10 days if she spends three consecutive days in city A and three consecutive days in city B. However, if you make her do both by spending one day at a time in each city, you add travel days and weekends for a total of seven additional days. This may seem to be an extreme example, but it has a similar effect to going back and forth between tasks. It takes time to repeatedly wrap up and pick up new tasks.

Too many projects at once can result in so much task thrashing that very little gets done. Determining the proper combination of projects to be done at the same time requires that each project have clear resource requirements and time schedules. At a high level, this can be determined during Project Origination. Dependencies between projects must be considered at this time.

**Pitfall #4 – CONGRATULATIONS! YOUR PROJECT WAS SELECTED. NOW WAIT**

The unpredictable nature of the state budget process is such that months, if not years, may have elapsed between that euphoric moment you learned that your dream project passed its final Origination hurdle, and the day that you, wizened, weary and bedraggled –but infinitely more astute – actually performed the first Initiation task by asking, "Whazzit all about?"

Often, by the time the project actually gets going, original players have either gone to bigger and better things, or have forgotten all about your puny little project, and the only thing that stands between your success and oblivion is good documentation. Dust off that old Business Case; dig out that forgotten Proposed Solution; and shake that Proposal Decision Notice into any face that dares to challenge your authority to proceed. Anticipate – and mitigate – the consequences of the likely delay by developing good Origination documentation, keeping it ready and up to date, and keeping your eyes peeled for good candidates for the eventual Project Team.

## Frequently Asked Questions

**Why should project selection be done at the enterprise level? I know how to run my division!**

No one has expertise in every area. Division heads do not usually know all of the activities in every other division. How often have you seen more than one division inventing solutions to the same problem? Not only do you waste resources developing multiple solutions, you then continue to waste resources maintaining two solutions to one problem. An enterprise view, with appropriate executive oversight, of all initiatives is vital to coordinate activities and maximize productive use of time.

**How am I supposed to make the Director (Commissioner, Chairman, etc.) understand the importance of this proposal? They are just too far removed.**

It is your responsibility to provide information that is sufficient to enable the Performing Organization's executive management to understand the value of your project in the written proposal. Show the benefits. Identify the targeted Customers. Explain the significance of the product. Illustrate the value at the level necessary to promote a clear understanding. Use the proposal to educate the executive management on the merits of your idea.

**Why should we expend the time and effort to create a proposal when we could just start doing the work?**

If everyone followed this philosophy, the organization would be pulling itself in so many directions that perhaps nothing of value would ever get done. Managers and executives need to manage the work of the organization to ensure its alignment with its mission. Proposals provide executive management with the information they need to manage the organization's resources.

**Why should we wait for their approval?**

Forging ahead without the appropriate approvals results in wasted resources if the proposal is declined, significantly altered, or delayed. For example, moving ahead without approval could cause you to use technology that executive management has already chosen to replace and you will now have to start over with a new hardware and software platform. The executive staff representatives on the selection committee may be privy to information that is not publicly announced yet. It is the responsibility of the executive staff to determine the priorities that staff is to address.

**The benefits of the project do not equate to cost savings. Should I even bother to submit a project proposal?**

Yes. Projects are evaluated based on multiple criteria, not just cost. Some projects, which have no cost savings, are initiated based on other benefits such as their ability to improve customer service.

# Chapter 2 – Project Initiation

## Purpose

The purpose of Project Initiation is to begin to define the overall parameters of a project and establish the appropriate project management and quality environment required to complete the project.

Development of the Project Charter is a pivotal starting point for the project, establishing the project definition that will serve as the foundation for all future efforts. The completion of this process is marked by the Project Kick-off Meeting, in which the Project Manager presents the Project Charter.

## List of Processes

This phase consists of the following processes:

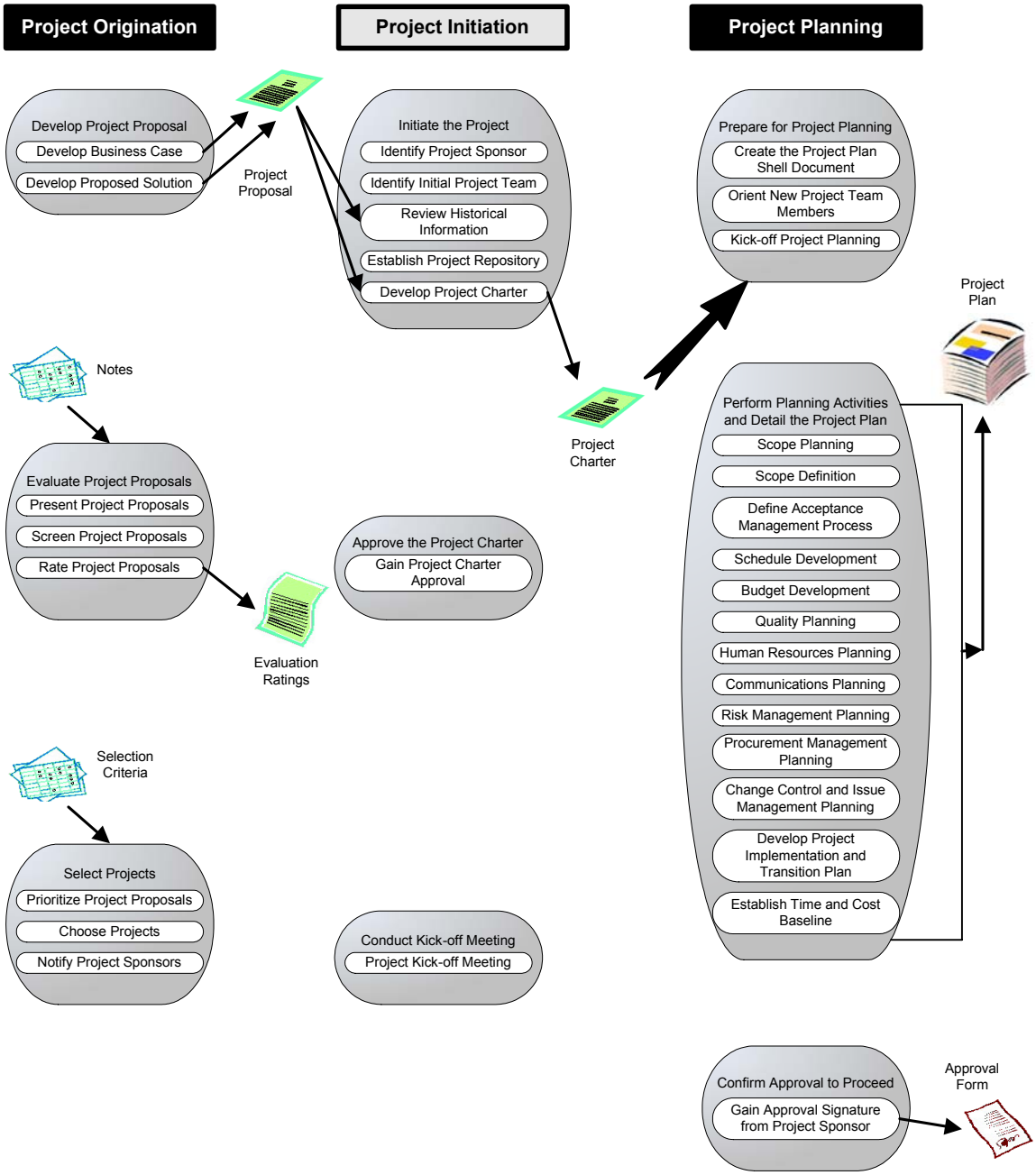
**2.1 Initiate the Project,** where the Project Sponsor and initial Project Team are identified and work with the Project Manager to create the Project Charter.

**2.2 Approve the Project Charter**, where the Project Sponsor formally approves the Project Charter, indicating approval to move forward with the next phase.

**2.3 Conduct the Project Kickoff Meeting**, where the Project Manager and Project Sponsor present the information from the Project Charter to the Project Team and kick off the project.

The following chart illustrates all of the processes and deliverables of this phase in the context of the project management lifecycle.

**Figure 2-1 Project Initiation in the Project Management Lifecycle**



## List of Roles

The following roles are involved in carrying out the process of this phase. Descriptions of these roles can be found in the Section I Introduction.

- ❑ Project Manager
- ❑ Project Sponsor
- ❑ Project Team Members
- ❑ Customer
- ❑ Customer Representatives
- ❑ Performing Organization

## List of Deliverables

Figure 2-2 below lists all Project Initiation tasks and their deliverables (and outcomes). A deliverable is a measurable, tangible, verifiable product. The items in italics are *outcomes*, which are more similar to results versus tangible deliverables.

**Figure 2-2 – Project Initiation Deliverables**

| Processes | Tasks | Deliverables and *Outcomes* |
|---|---|---|
| Initiate the Project | Identify Project Sponsor | *Project Sponsor* |
| | Identify Initial Project Team | *Project Team* |
| | Review Historical Information | *Information Reviewed* |
| | Establish Project Repository | Project Repository |
| | Develop Project Charter | Project Charter |
| Approve the Project Charter | Gain Project Charter Approval | Project Charter Approvals |
| Conduct Project Kick-off Meeting | Project Kick-off Meeting | Kick-off Meeting |

## 2.1 Initiate the Project

### Purpose

| Roles for this Step |
| --- |
| Project Manager |
| Project Sponsor |
| Project Team Members |

After the project has been approved to move forward, the project is assigned to a Project Team whose first responsibility is to **Initiate the Project**. The Project Manager must work to ensure that the Performing Organization's expectations and all available project information are effectively conveyed to the Project Team. This can be done collaboratively with the Performing Organization's management team.

Various areas of the Performing Organization may be required to provide resources to the project in order to complete Project Initiation. The Project Sponsor and Project Manager must determine specific resource requirements and effort estimates, and include them in the charter. The Project Sponsor must communicate with the affected areas of the Performing Organization, proactively gaining agreement and securing the necessary resources. The Project Sponsor must have a general understanding of the amount of effort that will be required to complete the project.

It is imperative that the Project Manager begins to track Project Initiation efforts and communicate status throughout. Items to discuss during status meetings include accomplishments, progress against schedules, work to be done, and any open issues that need resolution. As part of the Communications Plan for the project, a Project Status Report should be prepared and reviewed during Initiation meetings. See Appendix II Project Plan - Communications Management section for more information.

### Tasks

#### 2.1.1 Identify the Project Sponsor

| Tasks for this Step |
| --- |
| Identify the Project Sponsor |
| Identify the Initial Project Team |
| Review Historical Information |
| Establish the Project Repository |
| Develop the Project Charter |

If a Project Sponsor has not been identified, the Project Manager must work with Performing Organization management to identify and formally appoint someone to that position. Because the Project Sponsor will champion the project within the organization, secure spending

authority and resources, and provide support to the Project Manager, it is imperative that he/she be identified as early in the project management lifecycle as possible. Building the relationship between the Project Manager and the Project Sponsor is critical to project success.

### 2.1.2 Identify the Initial Project Team

The extent to which the Project Team has been defined at this point may vary. At a minimum the manager for the project and certain individuals who can provide support in preparing for the project should be identified.

During Project Origination, a Project Proposal was created. During Project Initiation, the Proposal is reviewed to determine the roles required to staff the project. With the help of appropriate Stakeholders, the Project Sponsor should take the lead in identifying the names of individuals within the Performing Organization who could fill the roles and become Project Team members. Names of the individuals needed to complete Project Initiation tasks will be documented in the Project Charter. In selecting the Project Team, definition of the skills required to perform current tasks as well as skills for future project tasks is needed. Immediate project needs should be met first.

Although the extent of the involvement necessary for each team member may not be known at this time, the Project Manager should provide those who will be involved in Project Initiation with a brief project orientation and review with individual team members their current and future roles on the project. This establishes a baseline understanding of team members' project responsibilities, which will be useful for conducting performance reviews later in the project.

Some agencies hold a meeting at the beginning of Project Initiation, where all potential Stakeholders come together to review the Project Proposal, discuss required roles, and assign Project Team members. In other agencies, establishing a Project Team is a less formal process.

You should choose and use the method to identify your Initial Project Team that will work best for your project and within your organization. Take the opportunity, from the outset, to establish the concept of a Project Team that comprises not only the folks reporting directly to you, but also your Project Sponsor, Customer Representatives, Customer Decision-Makers, and all other players participating in the Project Schedule.

### 2.1.3 Review Historical Information

Development of the Project Charter will require review of documentation compiled or presented during Project Origination. Materials and information reviewed may include:

- ❑ The strategic plan, a formal document produced by the Performing Organization that outlines the business goals and direction over a designated number of years
- ❑ The Project Proposal, including the initial Business Case, which describes the project objectives and how they support the Performing Organization's strategic business direction
- ❑ Project selection criteria, defining the parameters used in determining whether or not to undertake a project and identifying its business justification and measurements of its success
- ❑ Information related to federal funding for the project, such as grant applications and advanced planning documents
- ❑ Information from a previous project similar in size, scope and objectives
- ❑ Project knowledge and experience of the individuals on the Project Team

### 2.1.4 Establish the Project Repository

Maintaining information about the project in an organized fashion facilitates new team member transitions and creates a central point of reference for those developing project definition documents. Most importantly, it provides an audit trail documenting the history and evolution of the project.

All relevant project-related material, documents produced, decisions made, issues raised and correspondence exchanged must be captured for future reference and historical tracking. The project repository can be kept as hard copy in a binder or notebook, or as electronic files and email folders, or both, at the discretion of the Project Manager, in accordance with organizational records management policies.

All files related to the project should be grouped by categories within project-specific folders. The structure should be intuitive so that anyone browsing the directory can easily locate needed information. Within the primary hard copy repository, information should be organized in indexed volume(s) to enable easy access. An index should provide reference to

all material maintained electronically (e.g., a file directory or email folder by drive, directory, and filename). The most current hard copy of documentation should be kept in the primary hard copy repository, with earlier versions in the electronic file. By the end of the project, a project repository may include the following materials:

- ❑ Project Proposal and supporting documentation, including the Business Case
- ❑ Project description/definition documents such as the Project Charter and the Project Plan
- ❑ Any working documents or informal documents defining Cost, Scope, Schedule and Quality (CSSQ) of the project
- ❑ Project Schedules (baseline and current)
- ❑ Project financials
- ❑ Project Scope changes and requests log
- ❑ Project Status Reports
- ❑ Team member Progress Reports and timesheets
- ❑ Issues log and details (open and resolved)
- ❑ Project acceptance log by deliverable
- ❑ Products
- ❑ Risk identification/model documentation
- ❑ Contracts and other procurement documents
- ❑ Audit results, if encountered, and Large Project Reporting documentation
- ❑ Correspondence, including any pivotal or decision-making memos, letters, email…etc.
- ❑ Meeting notes, results, and/or actions

The project repository should be available to everyone involved in the project and must, therefore, be considered “public information.” It is not advisable to keep sensitive information concerning individuals on the project, such as salaries or evaluations, in the project repository. Some project-related documents may also be regarded as confidential. A confidential project repository should be established in a separate location to secure sensitive information.

The **North Dakota Open Records Law** requires agencies to generally assume that all are open records unless there is some specific exemption in the open records law (or the agency's laws or federal law) that makes specific information "exempt" or "confidential."

In general, if someone asks for records regarding a project, the agency is required to remove confidential information and disclose the rest of the record. You should contact your agency's legal counsel or the Office of Attorney General for any specific advice regarding these matters.

### 2.1.5 Develop the Project Charter

The purpose of developing the Project Charter is to provide authority to establish the project, broadly defining its purpose, goals, and objectives. The charter serves as a contract between the Project Team and Project Sponsor. The Project Charter is the first in a series of project definition documents defining the business goals and objectives the project will meet. Information within the Project Charter is provided at a general level that will be further refined in documentation produced during subsequent project activities. The charter also documents the project's mission, history, and background, and lists the benefits to be realized by the Performing Organization as a result of implementing the product or service.

Information compiled during Project Origination is used and applied in the development of the Project Charter. To further understand how the project was selected and to write an effective, comprehensive charter, the Project Manager must work with the Project Sponsor and any appropriate subject matter experts and Stakeholders.

If issues or conflicting project expectations are uncovered while developing the Project Charter, the Project Manager must communicate with Stakeholders to resolve the discrepancies, elevate the issues when appropriate, and obtain consensus. Decisions that impact project expectations significantly should be thoroughly documented.

The Project Charter should minimally contain the following sections:

- ❑ Background
- ❑ Objectives
- ❑ Required Resources for Project Planning or for entire project if known
- ❑ Constraints
- ❑ Authority

The Project Charter can also include a preliminary schedule, assumptions, a description of potential project risks, an organizational chart, and a communications plan. The important thing to remember is that the Project Charter is NOT the same as a Project Plan. The Project Charter's purpose is to formally establish the project, and is a much more high-level document than a Project Plan. It should be broad enough so it doesn't need to change (see Appendix I / Template E - Project Charter Template).

Developing the Project Charter is a collaborative effort. Working with the Project Sponsor, the Project Manager should document the objectives that must be achieved in order for the project to be considered a success. These objectives should correlate with the goals and objectives of the project.


An effective way to define an objective is to complete the following sentence, "The project will be a success if _____".

## 2.2 Approve the Project Charter

**Purpose**

Once the Project Charter has been developed, the Project Manager should schedule a meeting to review its contents, secure necessary resources, and gain formal approval.

**Roles for this Step**

Project Manager

Project Sponsor

Performing Organization

Approval of the Project Charter is a critical step in Project Initiation because at this point in time, the Project Sponsor may also decide to terminate the project. This "go/no-go" decision may be based upon factors outside the control

of the Project Manager (i.e., the organization may have new priorities that are in direct conflict with the project or increased risk may have been introduced to the project.) Realistically, termination of a project could happen at any point during the life of a project and is something a Project Manager should always keep in mind.

**Task**

### 2.2.1 Gain Project Charter Approval

**Tasks for this Step**

Gain Project Charter Approval

Meeting attendees should always include the Project Sponsor and the members of Performing Organization Management whose resources are affected. Attendees may also include other members of the Performing Organization who are able to provide resources that will add value to the project. During the meeting, the Project Manager presents the Project Charter for review. *The Resources for the Planning Phase (and for the rest of the project if known) are formally secured by gaining the signatures of the appropriate Performing Organization managers.* If resources are included for the entire project, the Project Sponsor should be informed that the figures are estimates and will be refined as the project progresses.

At the conclusion of the meeting, the Project Sponsor will formally approve or reject the charter. Should the Project Sponsor reject the charter, he/ she must provide the reasons for rejection to allow the Project Manager to make necessary adjustments. It is important to note that this acceptance and approval process is ongoing. The Project Manager should review and gain approval from the Project Sponsor and Customer Decision-Makers for all interim deliverables upon their completion. Interim acceptances should streamline final acceptance.

 At this point in the project, you may need to begin acquiring or transitioning the staff necessary to complete the work for the Planning Phase. If so, refer to section3.2.7 Human Resources Planning and section 3.2.10 Procurement Planning in the Planning chapter.

## 2.3 Conduct Project Kick-Off Meeting

### Purpose

**Roles for this Step**

Project Manager

Project Sponsor

Project Team Members

Performing Organization

When the Project Charter is complete and approved, a Project Kick-off Meeting is conducted. The Project Kick-off Meeting is the event that formally marks the beginning of the project. It is most likely the first opportunity for the Project Sponsor to assemble the entire Project Team to discuss his/her vision of the project, demonstrate support, and advocate project success. Project Team members are introduced to each other and given the opportunity to discuss their areas of expertise and how they will contribute to the project. The Project Charter is presented by the Project Manager and discussed in an open forum, to foster a mutual understanding of and enthusiasm for the project. At the conclusion of the meeting, Project Team members will understand their "next steps," and will leave the meeting ready to begin work.

### Task

#### 2.3.1 Project Kick-Off Meeting

**Tasks for this Step**

Project Kick-off Meeting

Prior to the meeting, an agenda and a presentation highlighting the contents of the Project Charter should be prepared by the Project Manager. The Project Manager should designate one of the Project Team members as the scribe for the session, to capture decisions, issues, and action items. The Project Charter and any applicable supporting materials are distributed to attendees for their review. The review of the charter contents ensures that expectations for the project and its results are in agreement. If not already done, the Project Manager must ensure that the Project Sponsor has provided his/her signature on the Project Charter, indicating his/her approval of theb contents of the document. If the Project Sponsor does not approve the charter, he/she must indicate the reason, to allow the Project Manager to make necessary adjustments.

Following the session, the notes and action items should be compiled into meeting minutes and distributed to all attendees (see Appendix I / Template F for a sample agenda).

 Depending on the project, you may determine that more than one Project Kickoff Meeting is necessary. The first Kickoff Meeting at this point may include only key team members that will be involved in the Planning Phase, and a subsequent Kickoff Meeting could be held with all team members as described above.

## Project Initiation End-of-Phase Checklist

**How To Use -** Use this checklist throughout Project Initiation to help ensure that all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

**Figure 2-3 Project Initiation End-of-Phase Checklist**

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| **Initiate the Project:** | | |
| Identify and assign the Project Manager | | |
| Identify and appoint the Project Sponsor | | |
| Identify Project Team Members | | |
| Identify Customer Representatives | | |
| Review historical information | | |
| Document how issues were resolved and decisions made | | |
| Establish the project repository | | |
| Update the repository with all project correspondence | | |
| Review Project Charter template | | |
| Work with Project Sponsor and Project Team to gain consensus on project expectations | | |
| Write the Project Charter document | | |
| **Approve the Project Charter** | | |
| Conduct Project Charter approval meeting | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Schedule time and location of Kickoff meeting | | |
| Invite appropriate attendees | | |
| Prepare meeting presentation and agenda | | |
| Designate meeting scribe | | |
| Prepare materials for distribution at meeting | | |
| **Conduct Kick-off meeting** | | |
| Facilitate the Project Kick-off meeting | | |
| Distribute notes to all attendees | | |

## Measurements of Success

The main measurement of success for Project Initiation is the decision to proceed with – or to halt – the project. While in the majority of cases, a well-executed Project Initiation leads to a transition to Project Planning, in some cases the organization is best served by deciding that the project should not continue.

Before the sign-off of the Project Charter, however, the Project Manager can assess how successfully the project is proceeding by utilizing the measurement criteria outlined below in Figure 2-4. More than one "No" answer indicates a serious risk to the continued success of your project.

**Figure 2-4 Checklist for Measuring the Success of Project Initiation**

| Measurements of Success | Yes | No |
|---|---|---|
| Do you have a committed, interested and influential Project Sponsor attached to the project? | | |
| Did you verify that your Project Charter reflects the vision of the areas of the Performing Organization affected by/involved in the project? | | |
| Did you identify specific benefits the product or service developed by your project will bring to the Customer? | | |
| Do you have a clear structure for the project repository? | | |
| Do you have approval of the Project Charter, signed by your Project Sponsor authorizing you to proceed to Project Planning, or halting the project? | | |

## Phase Risks / Ways to Avoid Pitfalls

Project Initiation lays the foundation for the rest of the project management lifecycle. In the same way that a faulty foundation will result in an unstable and eventually unusable building, an incomplete or improperly executed Initiation will result in a flawed project.

What are some of the key elements of Project Initiation that require the most attention? The following table identifies processes and tasks that are highlighted in this section.

**Figure 2-5 Importance of Project Initiation Process - Avoiding Pitfalls**

| Process | Task | Why is it Important? |
|---|---|---|
| Initiate the Project | Identify Project Sponsor | A project without a Project Sponsor is like a ship without a rudder – no matter how sleek the hull or how tall the masts, it just can't get anywhere useful. |
| Approve Project Charter | Gain Project Charter Approval | Just how far out on the plank are you willing to walk without formal buy-in from the sponsor? |
| Conduct Kick-off Meeting | Project Kick-off Meeting | To continue with a ship metaphor, it's important to get everybody on board before setting sail! |

**PITFALL #1 – No Sponsor, No Champion**

In Prepare for the Project, the first imperative is securing a Project Sponsor. Without the Project Sponsor to guide and support the project, the Project Manager has an impossible choice of either trying to take on the responsibilities of a Project Sponsor – for which he has no authority, or trying to secure the commitment of unwilling or uninterested executives – over whom he has little influence.

Having one Project Sponsor who is high enough in the organization to be of help, and interested enough in the outcome to be involved, is ideal. However, in many cases, the organization insists on more than one – usually the managers from the main business functions involved in the project – serving as joint Project Sponsors. If the managers are severely at odds with each other (e.g. about what the project ought to accomplish), in most cases the Project Manager can sit down with the Project Sponsor(s) as early as possible and hammer out a common vision of what the project is supposed to do. Some of the useful questions to ask to gain consensus are:

- ❑ What are we trying to accomplish? What is the desired outcome?
- ❑ Who will benefit, and in what ways?
- ❑ Why is the project important to YOU?
- ❑ How is it going to change the way people do their work?
- ❑ How will the organization adjust?

However, when the number of Project Sponsors exceeds two, trouble may be afoot. There will be so many more delays getting everyone to the same place, or chasing everyone down, so many more difficulties achieving a consensus, so many more corrections to deliverables, so many more minds to convince, so many more personalities to please. You'd better add lots of time to your schedule for securing necessary approvals!

The effort you will expend in securing an interested, influential Project Sponsor now will pay dividends throughout the duration of the project. In some organizations, often those with a defined project selection method, projects may only be requested by someone willing to be the Project Sponsor.

**PITFALL #2 – INEFFECTIVE KICK-OFF MEETING**

The importance of selecting an effective Project Team and writing a comprehensive Project Charter is self evident and well understood. However, the other key, but frequently overlooked or lightly regarded task in Initiate the Project is the kick-off meeting.

When conducted, the kick-off meeting is often wasted in a pro-forma, listless exercise of bringing unwilling participants together and stultifying them with boring recitations of project objectives, replete with industry buzzwords and technical jargon. Instead, you should look at the kick-off meeting as your opportunity to ignite interest in the project, secure enthusiastic participation in crucial activities later on, and set accurate expectations about what the project is – and is not – likely to accomplish.

How? First of all, the kick-off meeting should be a creative, participatory exercise, involving all attendees. Second, it should emphasize and focus on how the project and its eventual product will benefit each attendee. And third, it should be a showcase for the Performing Organization's commitment – and interest – in this project, and your team's enthusiasm for it.

To make it a creative, joint exercise, you may consider asking the attendees to share ideas on why the project is important and how it will benefit the organization as a whole. To involve self-interest, you may also want to ask participants to explain how the project will benefit each of them specifically, making their jobs better, easier or more fulfilling; and if they can't come up with anything, have the Project Sponsor make appropriate suggestions. To showcase executive commitment, develop a draft of "talking points" for the Project Sponsor to use in a statement at the beginning of the kick-off meeting, explaining why the organization is making a significant investment in this project, from both budgetary and human resource standpoints.

Finally, this is a great opportunity to showcase yourself and your team, and demonstrate great enthusiasm for the project, which will be contagious and will set the tone for the activities to come.

**PITFALL #3 – CHICKEN BEFORE EGG, SCHEDULE BEFORE PLAN**

 It is a lucky Project Manager who is not seized by "analysis paralysis" when pressured to develop a Project Schedule and Budget at this stage of the game.

How can I commit myself to an estimate (and let's not kid ourselves – the estimate you do put down will become a commitment, which the Performing Organization will immediately embed in whatever budgetary or strategic plan they are developing) without knowing enough about the project? This paradox is easily resolved if you can estimate as you go along – one phase at a time. Unfortunately, that is a luxury afforded few, if any, Project Managers. The budgeting process demands answers well ahead of the game, and there is no avoiding it. If you must provide preliminary Project Schedule and Budget information, the following information may help.

The one thing that can help at this stage is experience – either personal, or in the form of organizational historical data. If you have been involved in similar projects in the past, you develop a feel for how long things take, and what obstacles – other than product-related – must be overcome and accounted for in the schedule.

However, if you are new to project management, to the Performing Organization, or to the technology, you need to fall back on organizational knowledge. If you are lucky, the organization captured lessons learned from prior projects, and you can find out how long similar efforts have taken. More likely, no such knowledge base exists other than in people's heads, and your Project Sponsor can perform an important service in helping identify and recruit Project Managers who may have been involved in similar efforts. Make sure those efforts were actually successful – after all, you do not want to make the same mistake twice. Ask to see their initial and final Project Schedules. If they don't have either one (or worse, both) move along – anecdotal evidence is of very limited use in real life.

Most of the time, the end date for the project will be pre-defined by some event outside your control – executive commitment, governmental mandate, or some physical constraint. In that case, "backing into" an estimate is eminently reasonable. Walk through the entire project lifecycle backwards, making informed "guesstimates" along the way, and see if you end up at the beginning with today's date.

 Keep in mind that the earliest estimates tend to be on the optimistic side, before reality sets in. Consider your first attempt optimistic. Now make a second, more pessimistic attempt, assuming Murphy's Law. This will provide you with the worst-case scenario. The truth is probably somewhere in the middle.

In other cases, there is a budget limit that must be adhered to. Once again, you can back into your schedule by estimating how many weeks, months or years of effort by a reasonably-sized team the expected budget would support, and from there you can use the industry-standard percentages for product development lifecycles to approximate what your effort is going to be.

Most of all do not obsess over your preliminary schedule if you have included it in your Project Charter. Document carefully all your estimating assumptions, and run it by as many experienced and knowledgeable people as you can – not the least, your Project Sponsor.

**PITFALL #4 – PRETENDING NOTHING WILL GO WRONG**

 The one process that shockingly few organizations engage in despite the fact that it can provide the most "bang for the buck" is risk management, which consists of risk identification, assessment, and mitigation. *These activities should be completed in the Project Planning Phase, but you may wish to include some risks in your Project Charter during Project Initiation.*

Notice, there is nothing here that says, "risk avoidance." You can't avoid risk – stuff will happen, and most of it will negatively impact your project, if you let it. What you can do is anticipate it, and be ready with a solution before the problem arrives. Once again, either your own experience, or organizational knowledge (captured as historical data in a repository, or as knowledge in people's heads) is the key. What obstacles, problems and disasters did other projects run into before? How were they dealt with? What was the impact on the schedule?

Consider every aspect of your project. Ask yourself, what can possibly go wrong? What assumptions am I making that may not be accurate, or consistent? Then, for every risk factor that you identify, you need to determine how it can affect your project.

**PITFALL #5 – NOT ENOUGH TALK**

Another activity that costs very little, but can provide enormous benefits, is communication. In fact, one of the few success factors consistently cited in analyzing successful projects is frequent and comprehensive communication. Communication keeps all the players in the loop, avoids unpleasant surprises, and builds confidence in project progress and success. Nobody ever complains that they are being told too much, but they usually resent being told too little.

Anyone who will be in any way affected by the product or service that your project will develop must be communicated to at some point, and most likely throughout the project lifecycle.

**PITFALL #6 – IS THE PROJECT OFFICIAL?**

Finally, you are all done with Initiation. Your Project Charter inspires masses to commit great deeds. You think you are done? Not until you have a signature of someone that matters that certifies that your opinion of your work is justified, and that you have authorization to proceed to the next phase.

Remember that unless you are in the highly unusual situation of being your own boss, you do not have the authority to certify your own work, or the clout to commit resources to continue. And unless you want to go very far out on that proverbial limb, you need to have proof that someone with proper authority – most likely, your Project Sponsor – is on board with what you have done, and what you are about to do.

**PITFALL #7 – WE DON'T REALLY NEED TO FOLLOW ALL THESE STEPS, DO WE?**

Skipping tasks and their documentation in Project Initiation can cause serious consequences affecting all of the subsequent phases of your project. Project Management (as well as just basic Management) methodologies were developed not because people had nothing better to do with their time, but in response to crises and disasters that resulted precisely from seat-of-the-pants approaches (see PITFALL #5 in Project Planning).

## Frequently Asked Questions

**What if no one will agree to be the Project Sponsor?**

Although no one may have assumed the official role of Project Sponsor, someone secured the funding for this project, and someone appointed you to manage it. Talk to that person, explain the role of the Project Sponsor, and notify him that you will consider him your Project Sponsor unless someone else is identified to fill that position (see Pitfall #1, No sponsor, no champion).

**What happens later on if my preliminary time/money estimates are off by 50 to 100 percent?**

Accurate estimating takes a lot of effort, knowledge, available historical data, and a bit of luck. Chances are, your estimates are going to be off; the only questions are, by how much, and what will you do about it.

Your lack of accuracy could be due to one or both of the following: (1) you did a lousy job estimating (usually due to lack of historical comparative data) and/or (2) things changed. In the first case, take responsibility for your mistake, use it as a "learning opportunity," and make sure everyone realizes what you are doing. In the second case, make sure everyone's aware of the changes as soon as they occur, and use the change control umbrella to cover you (which you will define in the Planning Phase). Remember – management hates "surprises." It is better (for your career, at least!) to be off by a lot if everyone knows about it well ahead, than to be off by a little – and have it be a total surprise to the decision-makers. In both cases, it behooves you to document your estimating process and assumptions, and reforecast on a regular basis. If an underestimate becomes apparent, identify root causes, define corrective actions and alternatives, and work back with the Project Sponsor to head off any significant degradation of Project Schedule.

**How do I justify the initiation time to the Project Sponsor or Customer who just wants it done?**

It's called "Customer education." Encourage your Project Sponsor and your key Customers to read (or at least peruse) this ***Guidebook***. Explain to them the benefit they will derive from proper planning. Illustrate your arguments by pointing to other projects (hopefully, disastrous) and explaining why they failed (hopefully, due to lack of planning). Seek persuasive allies among their colleagues. And finally, use it as a continuous improvement opportunity: explain what has to be

accomplished, and ask for a creative way of getting the same result using some other means. Who knows, they may actually come up with a process improvement that you can use as a best practice later on (see Pitfall #7 for more details).

**What can you do if the Performing Organization doesn't recognize the importance of project management or feels that they can do it better?**

This is a kind of variation on the theme of the previous question. You can either try to persuade the folks that it's the right thing to do, or lead by example and just do it the right way. It is unlikely that everyone doesn't understand project management; seek out people with similar ideas, and have them bolster your arguments. Seek assistance from the EPMO with justifications and examples of successful projects done right. Brandish this ***Guidebook*** and follow the practices it advocates.

**Is the Project Manager expected to perform all of the tasks required of the role? Can some tasks be delegated in whole or in part?**

Great question! Management means, "getting work done through others." Delegation is one of its principal tenets. Depending on the size of the project, the Project Manager may be physically unable to perform some of the duties outlined in this book. For example, take new team member orientation. Ideally, the Project Manager would spend a chunk of time with every team member, inculcating proper disciplines and techniques. However, what if the Project Team comprises hundreds of members? Project Team Leaders must be identified to take on those responsibilities. But remember, it is still the Project Manager's responsibility to verify that delegated tasks are being executed correctly.

The most succinct way to answer this question is this: the Project Manager must do whatever it takes to have every task done right, on time, and within budget. Whether you accomplish this by sitting on the beach and firing off occasional e-mails (improbable), or by spending all your waking moments in the office (undesirable), you are still doing a fine job.

**What do you do if the Project Sponsor doesn't fulfill his/her role to the level of satisfaction expected by the Project Manager?**

The first thing to remember is it doesn't pay to fight your Project Sponsor. The Project Sponsor is your principal ally and benefactor. Reason, persuasion and education are the way to go.

First, make sure your Project Sponsor knows that you are both trying to accomplish the same goal: to solve a business issue with the product of

the project. Second, make sure the Project Sponsor understands – and agrees with – the approach the project is taking. Finally, once you have established commonality of interests, you can gently educate your Project Sponsor on the responsibilities of the position, and if their understanding differs, try to come to terms to which you both agree. Always argue from the benefit standpoint, explaining how a particular action on her part will benefit the project – and eventually the Project Sponsor.

However, what does the PM do if the 'positive' approach isn't working? If the Project Sponsor continues to not fulfill his/her role, the project sponsor needs to know that they too are responsible for the project. You as the Project Manager are not the only person who is to be held professionally accountable for the project. There needs to be a clear understanding that it is the Project Sponsor's project and the Project Manager is there to help the project succeed. If project success becomes threatened because of this situation, the Project Manager may need to escalate this as an issue to the Project Steering Committee (if one exists) or through other appropriate channels in the organization.

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# Chapter 3 – PROJECT PLANNING

## Purpose

The purpose of Project Planning is to define the exact parameters of a project and ensure that all the pre-requisites for Project Execution and Control are in place. Project Planning builds upon the work performed during Project Initiation.

Successful projects begin with a project plan that is *understood and accepted* by Stakeholders. Putting everything down in writing helps ensure a commitment among Project Team members and between the team and the Stakeholders. Once approved, the Project Plan ensures a consistent understanding of the project, helps to set expectations, and identifies resources necessary to move the project to the next level of detailed planning. Potential problems are identified so that they can be addressed early in the project.

Some of the most important portions of the Project Plan pertain to the project's Cost, Scope, Schedule, and Quality (CSSQ), or the project's quadruple constraints. This information will be refined and supplemented in later project phases as the Project Manager and team become more knowledgeable about the project and its definition. The Project Plan is not a static document; it requires iterative refinement. However as the Project Plan is revised, the integrity of the original documents should be maintained. This will provide an audit trail as to how CSSQ has evolved throughout the project lifecycle.

## List of Processes

This phase consists of the following processes:

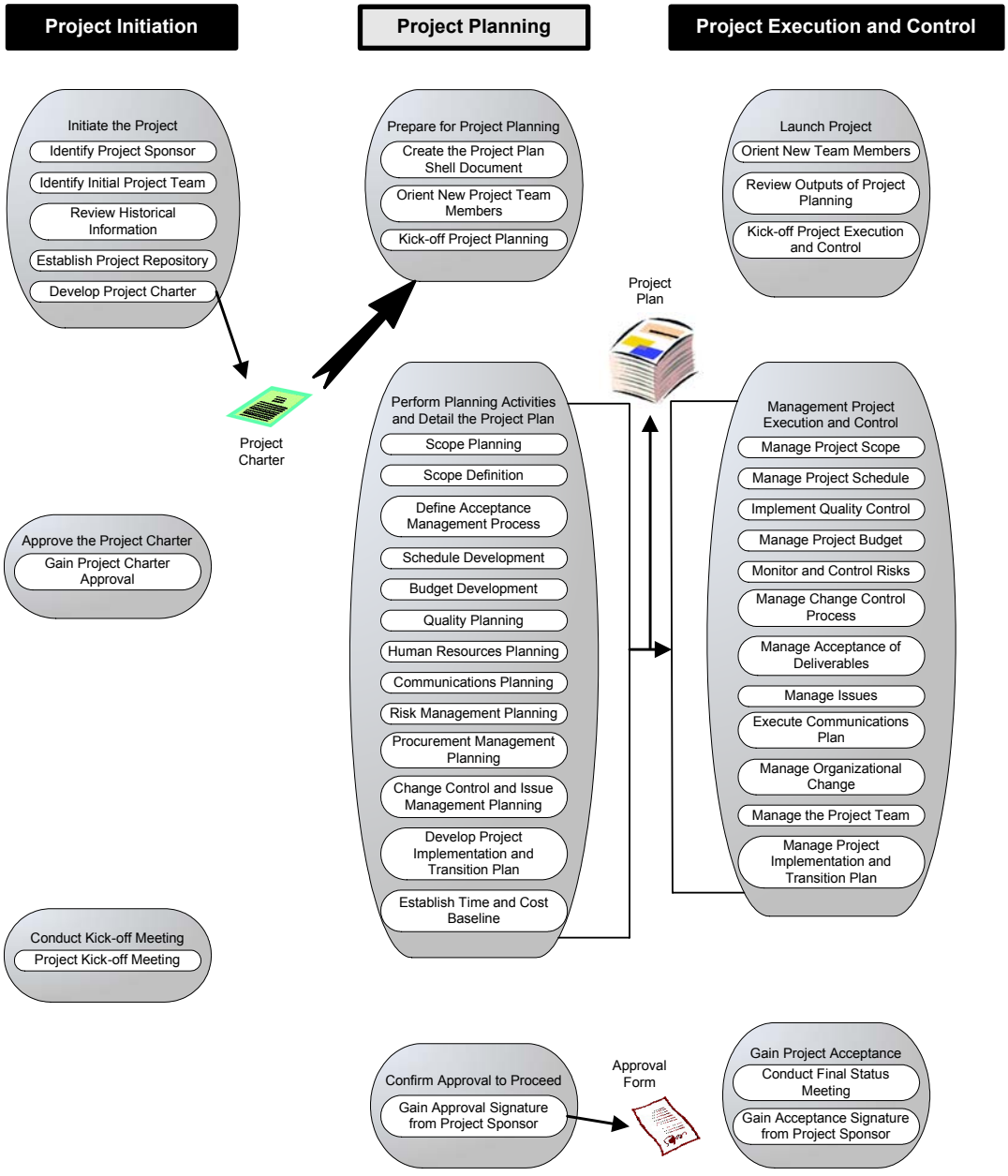
**3.1 Prepare for Project Planning**, where the Project Manager utilizes available templates and resources to draft the shell of the Project Plan Document. The Project Manager also kicks off the project planning phase with the Project Team.

**3.2 Perform Planning Activities and Detail the Project Plan**, where the Project Manager and Project Team define the scope, schedule, budget, quality standards, human resources, risks, communications plan, procurement plan, and change control / issue plan for the project.

**3.3 Confirm Approval to Proceed to Next Phase**, where the Project manager reviews and refines the Business Case, secures any additional resources, and prepares the project plan for review and approval by the Project Sponsor.

The following chart illustrates all of the processes, tasks, and deliverables of this phase in the context of the project management lifecycle.

**Figure 3-1 Project Planning in the Project Management Lifecycle**



## List of Roles

The following roles are involved in carrying out the process of this phase. Descriptions of these roles can be found in the Section I Introduction.

- ❑ Project Manager
- ❑ Project Sponsor
- ❑ Project Team Members
- ❑ Customer
- ❑ Customer Decision-Maker
- ❑ Customer Representatives
- ❑ Performing Organization Management
- ❑ Stakeholders

## List of Deliverables

Figure 3-2 below lists all Project Planning tasks and their deliverables (and outcomes). The items in italics are *outcomes*, which are more similar to results versus tangible deliverables.

**Figure 3-2 – Project Planning Deliverables**

| Processes | Tasks | Deliverables and *Outcomes* |
|---|---|---|
| Prepare for Project Planning | Create the Project Plan Shell Document | Project Plan Shell Document |
| | Orient new Project Team members | *Team member buy-in and understanding of Role* |
| | Review outputs of Project Origination and Initiation and the current Project Status | *Team member buy-in and understanding of Project* |
| | Kick off Project Planning | Kick off Meeting |

| | | |
|---|---|---|
| Perform Planning Activities and Detail the Project Plan | Scope Planning | Scope Statement |
| | Scope Definition | Work Breakdown Structure (WBS) |
| | Define Acceptance Management Process | Deliverable Approval Process |
| | Schedule Development | Project Schedule |
| | Budget Development | Budget Estimate<br>Cost Management Plan |
| | Quality Planning | Quality Management Plan |
| | Human Resources Planning | Roles and Responsibilities Assignments<br>Staffing Management Plan<br>Organizational Change Management Plan |
| | Communications Planning | Communications Plan |
| | Risk Management Planning | Risk Management Log |
| | Procurement Management Planning | Procurement Management Plan |
| | Change Control and Issue Management Planning | Change Control and Issue Management Process |
| | Develop Project Implementation and Transition Plan | Project Implementation and Transition Plan |
| | Establish Time and Cost Baseline | Time and Cost Baseline |
| Confirm Approval to Proceed | Gain Approval Signature from Project Sponsor | Accepted Project Plan |

## 3.1 Prepare for Project Planning

### Purpose

Project Planning is the most important phase of project management, and in order to ensure success, the Project Manager should complete a few initial activities to **Prepare for Project Planning.**

**Roles for this Step**

Project Manager

Project Team Members

### Tasks

The following tasks are listed in chronological order, however they may generally be completed simultaneously.

#### 3.1.1 Create the Project Plan Shell Document

**Tasks for this Step**

Orient New Project Team Members

Review Outputs

Kickoff Project Planning

There are various Project Plan templates to choose from; however, the template in this Guidebook located in Appendix II is recommended. By using this particular Project Plan template, agencies will become more consistent in their project management practices, which will enhance communication and the sharing of information among project managers.

 "Don't judge the book by its cover." Hogwash! While we are not advocating style over substance, the format, style, and presentation do mean a lot. During the few minutes that most decision-makers will spend reviewing your project plan you want them to be well disposed towards you, and able to abstract the most information in the least amount of time. A professional-looking document will make a good first impression; a well-organized text that clearly and logically builds your case will solidify that impression.

#### 3.1.2 Orient New Project Team Members

Project Planning activities cannot be completed without active involvement from the Project Team. If team members have been hired or transitioned at this point in the project, a brief orientation meeting or phone call can be very beneficial. As team members continue to be hired, an orientation session should be provided.

The goal of orientation is to enhance the ability of new team members to contribute quickly and positively to the project's desired outcome. If individuals have recently joined the team, it is imperative they have adequate workspace, equipment, security access, and supplies necessary to perform their required tasks. The Project Manager (or Team Leader, if appropriate) must convey to each new team member, in a one-on-one conversation, what his/her role and responsibilities are related to the project.

In order to streamline interaction among the team, new team members must also become familiar with the roles and responsibilities of all other Project Team members and Stakeholders as soon as possible, and immediately receive copies of all project materials, including any deliverables produced so far. It is usually the Project Manager's responsibility to get new members of the team up to speed as quickly as possible. On large projects, however, if the team is structured with Team Leaders reporting to the Project Manager, it may be more appropriate to assign a Team Leader to "mentor" the new individual.

Information that would be useful to new team members includes:

- ❑ All relevant project information from Project Origination and Initiation
- ❑ Organization charts for the Project Team and Performing Organization
- ❑ Information on project roles and responsibilities
- ❑ General information about the Customer and Performing Organization
- ❑ Logistics (parking policy, work hours, building/office security requirements, user id and password, dress code, location of rest rooms, supplies, photocopier, printer, fax, refreshments, etc.)
- ❑ Project procedures (team member expectations, how and when to report project time and status, sick time and vacation policy)

 Project Managers make use of orientation checklists to ensure that nothing is forgotten during orientation sessions. It's a good idea to retain a package containing a checklist, an orientation meeting agenda, project materials and logistical information. Then, when a new member joins the Project Team, you can just copy its contents. Remember to keep the contents of the package current.

### 3.1.3 Review Outputs of Project Origination and Initiation and the Current Project Status

Before formally beginning Project Planning, the Business Case and Project Charter should be reviewed with the Project Team. This is a checkpoint process – to recap what has been produced so far and analyze what will most likely be refined as Project Planning takes place. It is especially useful for any new members joining the team during this phase. The review of materials may spark innovative ideas from new team members since they bring different and varied experiences to the project.

### 3.1.4 Kick Off Project Planning

As described in Project Initiation, a separate kick off meeting can be held to kick off Project Planning. The Project Manager should determine the appropriate attendees and agenda, which is dependent on the size and complexity of the project (refer to Section 2.3 for more information about kick off meetings).

## 3.2 Perform Planning Activities and Develop the Project Plan

### Purpose

The Project Manager and Project Team define the project scope, schedule, budget, quality standards, human resources, risks, communications plan, procurement plan, and change control / issue plan for the project.

| Roles for this Step |
|---|
| Project Manager |
| Project Sponsor |
| Project Team Members |
| Customer Representatives |
| Stakeholders |
| Performing Organization |
| Customer Decision-Maker |

Performing the Planning activities and developing the Project Plan is an iterative process and the information in the Project Plan is progressively elaborated. An example Project Plan has been provided for you in Appendix II and will be referred to extensively throughout this phase.

### Tasks

It is recommended to follow the order of the tasks as presented, however they may be completed simultaneously. The tasks are modeled closely after the Planning Processes recommended in the Project Management Institute's (PMI's) Project Management Body of Knowledge (PMBOK). Refer to Appendix III for a summary of the PMBOK processes. It is highly recommended that you become familiar with the processes and tasks of the PMBOK, which can be ordered from directly from PMI.

| Tasks for this Step |
|---|
| Scope Planning |
| Scope Definition |
| Define Acceptance Mgmt. Process |
| Schedule Development |
| Budget Development |
| Quality Planning |
| Human Resources Planning |
| Communications Planning |
| Risk Mgmt. Planning |
| Procurement Planning |
| Change Control & Issue Mgmt. Planning |
| Develop Implementation & Transition Plan |
| Establish Time & Cost Baseline |

### 3.2.1 Scope Planning

The written scope statement is a starting point for project planning and is also the foundation of the project plan (see the Appendix II Project Plan - Scope Management/Project Scope Statement section).


It is important to recognize that during Scope Planning the Project Team focuses on defining the *Project* Scope not the *Product* Scope. To illustrate, the Scope Planning phase in an application software project may include the identification of a requirements definition, an analysis document, and a design document as deliverables, which defines the *Project* Scope. Later in the project as the Project Plan is executed, the requirements definition will be created, which defines the *Product* Scope.

The scope statement should include, either directly or by reference to other documents:

- Project justification - the business need the project will address.
- Project's product – a brief summary of the primary deliverable of the project or the end result of the project (e.g., a product, service, other).
- Project objectives – the quantifiable criteria that must be met for the project to be considered successful.
- Project deliverables – a list of the summary-level deliverables which, when produced and accepted, indicate project completion. For example, the major deliverables for a software development project might include the system code, a user manual, and system documentation. All deliverables will be defined in Scope Definition.

Also included is a list of those items/deliverables that are not in scope for the project.


It may not always be clear what is exactly in scope and out of scope this early in the project. If it is not clear, then the Project Manager needs to identify when the scope will be clearly defined and be intimately involved to ensure that any resulting impacts from the expanded scope are properly managed.

The Project Charter, including the project outcome description, provides necessary information for defining the Project Scope relative to the

business need and benefit for the organization undertaking the project. The scope statement will build on the outcome of the project described in the Project Charter by developing an approach to deliver that result, and by developing additional detailed information about the scope of work to be done. Interviews with other Project Managers who have had experience developing scope statements for similar projects can also be helpful.

"Scope creep" is a major concern of project management. How do you combat it? By pre-empting it with a thorough, accurate, precise, and mutually agreed upon Scope Statement. Avoid words and statements that require judgment or invite interpretation, such as 'improve," "enhance," "better," "more efficient" and "effective." Use numbers, facts, and concrete results. Use quantifiable terms, and provide target values or ranges. Emphasize outcome, not process. "We will work very hard for a long time to improve our response capability and enhance our effectiveness" belongs in a Dilbert cartoon.

While writing the Project Scope, the Project Manager and Customer Representatives must consider the effect the outcome of the project may have on the Performing Organization. The organization must be prepared to support the product once it is transitioned. If implementing the product will result in a change to the way the organization will conduct business, the Project Manager, Project Sponsor, and Customer must anticipate impacts and communicate them proactively to the Consumer community. Sometimes people are resistant to change. Selling the positive aspects of the project and the benefits of its product throughout the project's duration will facilitate acceptance.

If adaptation to the new environment requires new skills, the Project Manager will need to identify appropriate training opportunities and include them in Appendix II Project Plan – Human Resources/Team Development section.

### 3.2.2 Scope Definition

It is important to remember that refinements to the Project Scope must include discussions and interviews with the Customer and other appropriate Stakeholders. The scope document, therefore, will reflect a mutual agreement between all parties, which is more likely to ensure that buy-in is achieved. A clearly defined Project Scope is critical to the success of a project. Without a clear definition, work already performed may be subject to rework, resulting in lower team productivity.

During Scope Planning, a scope statement was written to document a basic description of the project and its deliverables. Refining the Project Scope breaks deliverables into smaller pieces of work, allowing the scope and the existing Project Budget, Schedule, and quality measurements to be more accurately defined. Where the initial Project Scope statement highlighted the deliverables to be produced in support of the desired project outcome, Scope Definition goes one step further. Using the information learned during Project Initiation, and based upon input gained by communicating regularly with the Customer and other appropriate Stakeholders, the Project Team must refine the Scope statement to clearly define each deliverable – including an exact definition of what will be produced and what will not be produced.

**Work Breakdown Structure (WBS)**

A Work Breakdown Structure (WBS) is a very useful work product that a Project Manager should create to facilitate the development of a Project Schedule, the next task in Project Planning. A WBS is a graphical representation or outline of the hierarchy of project deliverables and their associated tasks. As opposed to a Project Schedule that is calendar-based, a WBS is deliverable-based, and written in business terms. All tasks depicted are those focused on completion of deliverables. There are no dates or effort estimates in a WBS (see Appendix II Project Plan – Scope Management/ Project Scope Statement).

Using a WBS, Project Team members are better equipped to estimate the level of effort required to complete tasks, and are able to quickly understand how their work fits into the overall project structure.

The first hierarchical level of a WBS usually contains the phases that are specific to the lifecycle of the project being performed. (For example, the first level of the WBS for a software development project would most likely contain System Initiation, System Requirements Analysis, System Design, etc.)

For this reason, a WBS may be reused for other projects with the same lifecycle. Once the first level has been completed, it is broken down into more detailed sub-levels, until eventually all tasks are depicted. When defined to the appropriate level of detail, a WBS is very useful as input to both creating and refining a Project Schedule, including estimating required resources, level of effort, and cost.

Unfortunately, a WBS has not traditionally been used in state government and higher education projects, but it is truly a valuable tool, even for small projects. It forces the Project Team to identify all the expected deliverables of the project, which are the true 'success measures.'

**How to develop a WBS**

Break each deliverable described in the Project Scope statement down into smaller, more manageable work packages. Repeat this until the work packages are small enough to be defined in the greatest possible detail. Questions to ask to determine if each deliverable has been broken down sufficiently are:

- Can we clearly state what tasks will be done to complete the work and what will NOT be done?
- Can we estimate the time needed to complete the work? Are we able to assign an individual who will be responsible?
- Can we assign a dollar value to the cost of completing the work?

If the answer to any of these questions is "No," that particular work package needs to be further broken down. This "decomposition" exercise assists project staff to better understand and properly document the Project Scope. It also provides information needed for Project Schedule and budget revision.

The WBS is not static - the Project Manager should work with the Project Team during each project lifecycle phase to refine the WBS and use it as input to refining the Project Schedule.

A WBS Dictionary can be helpful to serve as the portion of the Project Plan that includes a description of each deliverable and the activity that will be performed to deliver it.

**Refining the Project Scope**

As previously mentioned, in most projects once the overall project planning is complete the first major task is to detail the *Product* Scope. This is an appropriate and necessary step. For example, in a building construction project, architectural drawings will be completed; for application software projects, detailed requirements definition and design will be completed.

*Refining* or *detailing* the Project and Product Scope is important and necessary. This differs from the important step of managing a change in scope.

Documenting how to determine what constitutes a change in scope is a difficult process, but one that is critical to the change control management process as the project is executed. When a change in scope is requested, the Project Manager and Customer must consider the effect the changes may have on the organization, anticipate the impacts, and communicate them proactively to the user community. Later in 3.2.10, 'Define the Change Control Process' is explained.

Communication between the Project Manager and the Customer is crucial in creating a Scope Statement and WBS that clearly reflects what the Customer needs and ensuring a mutual agreement between all parties. If the Project Scope is not accurately described and agreed upon, conflict and rework is almost certain to occur.

### 3.2.3 Define Acceptance Management Process

As outlined above, a detailed definition of each deliverable that will be produced during the course of the project is created in the Scope Statement, WBS, and WBS Dictionary. A deliverable is considered complete when it has been accepted by the Customer. The Project Plan must be revised to include a definition of the acceptance management process to be used for the project.

It is recommended that "acceptance" be defined as an authorized Customer Decision-Maker's written approval signifying that a deliverable meets expectations. It should be clearly stated that verbal acceptance or acceptance by default is not sufficient. To expedite the acceptance process, it is recommended that one individual per deliverable be given final decision-making authority. This person will be responsible for obtaining feedback from and representing the Customer.

In order for a deliverable to be considered "complete" and "acceptable," it must be measured against pre-determined acceptance criteria. The Project Manager and Customer must agree on the required criteria and the criteria must be documented and included in the Project Plan.

To ensure timely acceptance of deliverables, the Project Manager and Customer Decision-Makers should agree on the format, content and appearance of deliverables before they are produced. This information should be documented and included in the Project Plan. This helps to prepare the Customer to receive deliverables, and to avoid situations where deliverables are rejected because they do not meet Customer

expectations. It is also important for the Project Manager to solicit feedback on deliverables throughout their development. Interim reviews of deliverables will streamline final acceptance.

For an example Deliverable Acceptance Form, refer to Appendix I / Template I – Deliverable Acceptance Form.

In addition to acceptance criteria, the Project Manager and Customer Decision-Maker must agree on, formalize, and document the deliverable acceptance process. Items that must be defined are:

- The number and identity of Customer Representatives who may be required to review deliverables before final approval from the designated individual(s) is sought. A reviewer is usually an expert who is very knowledgeable about the details of the subject matter in the deliverable. In many organizations a Customer Decision-Maker with approval authority will not sign an approval form until a deliverable is thoroughly reviewed by an expert.


Don't be afraid to list the names of several reviewers, as different experts may need to be consulted depending upon the contents of the deliverable being produced.

- The number of business days in which deliverables must be either approved or rejected by the Customer. When establishing an agreement regarding the acceptable number of business days for deliverable review, the Project Manager must consider that the process is iterative and may take more time than initially thought. The amount of time for deliverable acceptance must be included in the Project Schedule, and should be sufficient to include the following activities:
  - Presentation of the deliverable by the Project Manager to the appropriate Customer Representative.
  - Independent review of the deliverable by subject matter expert(s). The more experts, the more time it will take.
  - Independent review of the deliverable by Customer Representatives. Again, the more decision-makers, the more time it will take.
  - Group review sessions, if required.
  - Rework of portions of the deliverable, if required.
  - Resubmission of the deliverable.

- Re-review by the subject matter expert and Customer Representatives.
- Pursuit of approval signature by the Project Manager.

❑ The number of times a deliverable can be resubmitted to the Customer for approval. It is very important for the Customer to include reason(s) when rejecting the deliverable so the Project Team can address them when resubmitting. If the number of iterations exceeds the number defined in the deliverable acceptance process, further work on the deliverable will require a change request. If the number of iterations becomes unreasonable, the Project Manager should recognize that a bigger problem most likely exists. Setting the maximum number of deliverable revisions and iterations will avoid the situation where a deliverable is "never quite done." Whatever the number of iterations that is agreed upon, the Project Manager must build time to accommodate them into the Project Schedule.

❑ The escalation process that will be followed if a timely decision on approval or rejection of a deliverable is not met. Will the situation simply become an open issue in the Project Manager's status report? Will executive intervention be required? Or will it be a combination of both?


Maintain an "Acceptance Log" in your Project Status Report to track the status of a deliverable as it goes through iterations of the acceptance process. (See Appendix I / Template H - Project Status Report).

### 3.2.4 Schedule Development

An accurate, realistic, and complete schedule, rigorously maintained, is essential to the success of a project. Sponsorship of the project must be confirmed or gained during Project Initiation. Having a Project Sponsor, and securing approval early in the project management lifecycle, helps to ensure a commitment to the project.

Using a scheduling tool such as Microsoft Project, perform the following steps:

1) Using the information from the WBS as input, the Project Manager should begin to document effort estimates, roles and dependencies, in preparation for creating a Project Schedule using a project scheduling tool. It may also be helpful to solicit input from past Project Managers, Project Team members and subject matter

experts for insight into past project performance, and to help uncover required activities, dependencies, and levels of effort. Researching and documenting this information first will not only help organize thoughts on paper, but may bring new information to light.

 You probably will not have sufficient information to break each and every component down into excruciating detail, especially if your project spans a long period of time. How can you predict the amount of work required to produce a deliverable that is scheduled to begin two years from now? You can, however, provide an estimate for the entire project at a high level, and should be able to provide accurate detail for the level of work required for the next 3 to 6 months. Describe the entire project to the level of detail you currently understand. Remember, as the project progresses, you will gain the information you need to break components down and provide estimates for the NEXT 3 to 6 months!

**A good rule of thumb to follow is the "eighty-hour rule": if the task requires more than two weeks duration to complete, it should be broken down further.** This provides a solid basis for estimating level of effort, task planning, assignment of work, and measurement of performance in Project Execution and Control. Use of the "eighty-hour rule" not only greatly facilitates scheduling, but also lays a foundation for accurate tracking of actuals; reporting on progress is reduced to an objective, binary mode: each task (and its deliverable) is either done or not done.

On smaller projects a Project Manager works directly with Project Team members to obtain individual input on effort estimates. On larger projects with multiple components, the Project Manager most likely relies on the input of Team Leaders or individuals who are expert in the specific subject areas. In either case, the Project Manager should gain input from individuals who will actually perform the work or who have performed similar work in the past. This will not only make the effort estimates more accurate, but will help generate excitement and buy-in from the Project Team, as they will feel more a part of the process. Estimating the time to complete an activity is directly influenced by the capabilities of the individual assigned to perform it. The skill level of each person on the team should, therefore, be considered when doing effort estimates. A good practice is to base estimates on an assumed level of skill. This will

allow the Project Manager to adjust his/her estimates up or down when the actual team is in place and the exact skill levels are known. It is imperative that all assumptions used in estimates are documented.

An experienced Project Manager also takes into account absenteeism, meetings, discussions, and staff interaction. A successful schedule builds in reality factors. Specific team members may have ongoing responsibilities occupying a portion of their time, and this must be factored into the schedule. Once effort estimates have been determined for each activity, the Project Schedule must be revised to reflect them. Any revisions or refinements that were made to the Project Scope will directly affect the Project Schedule and must be reviewed and incorporated into the schedule as needed.

2) Dependencies among tasks must be defined and adjusted later as necessary. The Project Manager must recognize:

   - **Mandatory dependencies** – those dependencies that are inherent to the type of work being done. They cannot and will not change, no matter how many individuals are working on a task or how many hours are allocated to a task (e.g., the frame of a building cannot be built until the foundation is in place). The Project Manager must recognize mandatory dependencies since they will dictate the way certain pieces of the schedule will need to be structured.
   - **Discretionary dependencies** – those dependencies that are defined by the Project Team or Customer that force the Project Manager to schedule tasks in a certain way. For example, the Project Team may be required to use an in-house "best practice" to complete an activity that forces other activities to be completed in a specific sequence.
   - **External dependencies** – outside the realm of the project or outside the control of the Project Manager or Customer, these dependencies may direct how portions of the project schedule must be defined. For example, a project activity may be dependent upon an outside vendor delivering a piece of equipment. This is something neither the Project Team nor the Customer can control, but it must be defined and considered when revising the schedule.

Project Schedules must also take into account:

- **Calendars** – the hours and days when project work is allowed, including seasonal restrictions, holidays, labor contract restrictions, vacation or training schedules.
- **Constraints** – completion dates for project deliverables mandated by the Project Sponsor, Customer, or other external factors, which will most often be known early in the project.

Additionally, there may be financial, legal, or Legislative-driven constraints that help dictate a project's timeline.

3) Once the schedule has been revised to include tasks, effort estimates, resources, and dependencies, the Project Manager should study the schedule to determine its critical path. The critical path is the sequence of tasks in the schedule that takes the longest amount of time to complete. If any task on the critical path is delayed, the entire project will be delayed.

   A Project Manager can determine the critical path in a Project Schedule by looking at all tasks that run in parallel and computing the total amount of estimated time to complete them. The path that takes the most time to complete is the critical path. Tasks on the critical path that are completed late will delay the project, unless the Project Manager takes proactive steps to finish subsequent critical tasks ahead of schedule. Because of the important relationship between critical tasks and the project end date, the Project Manager must always be cognizant of the critical path and understand how it is affected when changes are made to the Project Schedule.

 Work with an experienced Project Manager, if you can, to learn tips and techniques for breaking work down, estimating time required to complete certain pieces of work, and refining the Project Schedule. Someone familiar with the process and the scheduling tools can save a more inexperienced Project Manager a lot of time and frustration!

If experienced Project Managers are not available, consider getting effort estimates from multiple sources, comparing results and estimating the duration based on the multiple inputs. Involving the Project Team in the planning process will not only help ensure estimates reflect reality, but will also help gain team buy-in and acceptance.

 And remember…always document any and all assumptions made when deriving estimates or updating the Project Schedule. This "audit trail" will prove invaluable if you need to retrace your steps down the road or must explain why schedule revisions are necessary!

The Project Schedule has a place in the Project Plan, just as the Scope Statement and WBS do. However, since a software application was probably used to develop the Project Schedule, it may need to be added to the Project Plan by copying and pasting it instead of directly entering it into the Project Plan (see Appendix II Project Plan - Time Management/Schedule section).

**Refining the Project Schedule**

After the Project Plan is approved (including the Project Schedule), when a change in scope is requested, the Project Manager and Customer must consider the effect the changes may have on the organization, anticipate the impacts, and communicate them proactively to the user community (refer to 3.11 Define the Change Control Process).

### 3.2.5 Cost Estimating and Budget Development

Using available tools, the Project Manager calculates the budget that will be required to complete project activities. The Project Manager should use the project budget to allocate costs to project activities, and all aspects of the project, including the cost of internal and external human resources, equipment, travel, materials and supplies, should be incorporated. The budget should be much more detailed and more accurate than it was during Project Origination.

The Project Manager should use manual or automated tools to generate the Budget Estimate. The budgeting tools may be simple spreadsheets or complex mathematical modeling tools (see Appendix II Project Plan – Cost Management/Budget section). For historical purposes, and to enable the budget to be refined, the Project Manager should always maintain notes on how this budget was derived. Cost estimating checklists help to ensure that all preliminary budgeting information is known and all bases are covered.

The Project Manager must also include in the budget the cost of both the human resources and the equipment and materials required to perform the work. The method by which staff and products will be acquired for the project will directly affect the budgeting process, but is explained in 3.2.9 Procurement Planning section.

 In coming up with the project's budget, many Project Managers fall into either of the two extremes, depending on their temperaments and prior experience: those that are risk averse or have been burned in the past "aim high," inflating the Project Budget to protect against all eventualities; and those that are "green," optimistic, or afraid of rejection "aim low," underestimating the risks and realities. Neither approach, of course, is optimal: both put the whole project at risk, the former by either disqualifying the project in view of limited funds or inviting uninformed wholesale cuts, the latter by setting unrealistic expectations and guaranteeing multiple additional requests for more money.

The best approach is to use organizational experience, your own expertise, and the best advice you can muster, to predict with the greatest possible accuracy what the project will actually cost, and then set up a portion for change orders. A best practice is to calculate change order funds (sometimes called contingency) at 10-20% of project costs. This may be difficult to justify as a single line item so be prepared to defend it by tying it to real activities and risks. **Above all, document the basis of your estimates!**

A number of constraints, financial, political, and organizational, may dictate the methods by which required individuals, equipment, and materials are acquired. The Project Manager needs to be aware of existing resource acquisition policies, guidelines, and procedures. In addition, the preferences of the Performing Organization's management team and/or the Customer Representatives may influence acquisition decisions.

In any case, the strategies defined should satisfy the needs of project Stakeholders. Information from similar past projects can be used to gain an understanding of acquisition strategies; those that were successful and applicable may be considered for implementation on the current project.

As the Budget Estimate is being developed, additional tasks may be identified because the work is being further defined. It may be necessary to update the Project Schedule portion of the Project Plan to include these tasks that were identified during Budget Planning, in case the tasks needed to acquire equipment, materials, and other non-human resources.

**Cost Management Plan**

The Cost Management Plan is a description of the method for how expenses will be managed, including a preliminary disbursement schedule. For example, the accounting, expense verification, and bill payment procedures should all be explained in the Cost Management Plan. The plan may be formal or informal based on the needs of the project stakeholders (see Appendix II Project Plan – Cost Management /Cost Control section). The Cost Management Plan can describe a description of how cost variances will be managed, but it is recommended that cost variances be managed through the Change Control Process, described in Section 3.11.

### 3.2.6 Quality Planning

If the Performing Organization has established quality standards, the Project Manager can reference the document containing the quality standards the organization already has in place. In most cases, however, this document does not exist, or the quality standards are not in place. The Project Manager and Customer Representatives must identify and document standards for each project deliverable during Project Initiation. If quality standards are not identified and documented, the Project Manager will have no way to determine if deliverables are being produced to an acceptable quality level.

The Project Scope statement documents what the outcome of the project will be, and will help determine the appropriate quality standards to use. Additional information discovered when defining your project approach (e.g., your materials acquisition strategy) that is above and beyond that contained in the scope statement may aid in identifying quality standards. Performance of a cost/benefit analysis can show whether the benefits of implementing the desired quality standards outweigh the cost of implementing them. Research of past projects that implemented quality standards similar to those that are candidates for the current project can also be helpful.

 The amazing thing about quality standards is that nobody has them available when the project starts, but everybody knows what they were supposed to be when the product is delivered. Do not accept lack of documentation as an excuse to skimp on your homework. On the contrary, dig down through organizational layers to discover what was used in the past (here's another way your historical data research pays off!) and what will be expected in the future. Don't forget to ask your counterparts in other ND state agencies (or the agencies of another state entirely). Also remember to review specific North Dakota standards and regulations that could dictate the quality standards to be measured against for a particular project. If you can't find anything – create it, document it, publicize it, and put it in your Project Status Report and your project repository.

The Project Manager communicates with the Customer to establish and document all quality activities to be implemented during the course of the project to ensure the defined quality standards will be met. This is called quality assurance. Sometimes quality assurance for specific types of deliverables is performed by a separate Quality Assurance Department. A description of all quality activities to be implemented during the course of the project should be included in the Quality Management Plan (see Appendix II Project Plan – Quality Management section).

If an organization does not have the luxury of a Quality Assurance Department, the required activities will need to be performed by designated Project Team members or Customers. Examples of quality assurance activities include:

- ❑ Collecting project documentation
- ❑ Conducting audits
- ❑ Verifying business requirements
- ❑ Performing testing

### 3.2.7 Human Resources Planning

In Human Resources Planning, the Project Manager defines the organization of the Project Team and outlines Stakeholders' roles and responsibilities. All Stakeholders who will be involved in some capacity on the project should be identified. Some may be indirectly involved in an ancillary agency unit or as external vendors or suppliers. Necessary contacts with agencies such as the Office of Management and Budget (OMB), the Office of the State Auditor, and ITD must be included. Members of these agencies are key Stakeholders in many projects and interaction with them should be coordinated and planned.

#### Define Role and Responsibility Assignments

Project roles and responsibilities can be defined in a matrix or through an organizational chart, or both. A team directory is also an important document to develop (see Appendix II Project Plan – Human Resources/Team Directory section). The minimum information to be included in the team directory is the name of the person, their role/team membership, phone number, and email address. The individual's work hours are also a good attribute to include.

It is also important to ensure that the Project Team performs their roles throughout the project, which may require polite reminders on an occasional basis. Misunderstandings about responsibilities can be avoided by clearly identifying the Project Team roles and responsibilities. This important step cannot be emphasized enough.

 One of the greatest challenges in project management is getting the work done by individuals and business units that do not report to the Project Manager, or even to the Project Manager's entire chain of command. The earlier you can identify whom you need cooperation from, and the more detail you can provide as to the extent and outcome of that cooperation, the better your chances of actually influencing the work done. Make your case early and convincingly, emphasizing how each person can benefit the project.

#### Define Staffing Management Plan

The Staffing Management Plan describes when and how human resources will be brought onto and taken off of the project team.

Once the Project Manager assesses the needs of the project, financial considerations, time constraints, and individual skills and availability, a

method is defined for acquiring project staff. Depending on the way different organizations relate to one another, strategies used to acquire staff may vary. It is important for the Project Manager to understand the reporting relationships, both formal and informal, among different organizations, technical disciplines, and individuals. Staff may be allocated from within an organization or from an outside source using an established staff procurement procedure. The Project Manager should work with the Project Sponsor to determine staffing options.

The skills required for the project influence the means by which staff members are acquired. If there are limited qualified in-house resources available to staff a project or if a Project Manager has had positive experiences with contract staff, for example, he/she may elect to retain contractors to fill the positions rather than allocating resources from within. If it is determined that it is necessary to recruit staff from outside the Performing Organization, the Project Manager should work with the agency human resource office. The human resource office can assist in the recruitment of qualified staff in accordance with state and federal rules.

If the decision is made to utilize private consultants or contractors, the Project Manager should follow the steps outlined in 3.2.10 - Procurement Planning.

**Team Development Planning**

To effectively perform the activities required to produce project deliverables, Project Team members must have appropriate levels of skill and knowledge. It is the job of the Project Manager to evaluate the skills of team members and determine whether or not they meet the current and future needs of the project. It is important to remember that there are many kinds of skills. Some are technical and others are “soft skills,” such as management, presentation, and negotiation skills. If it is determined that the team needs training, the Project Manager must include training in the Project Schedule and Project Budget. Some skills can be learned on the job, some can be learned through informal mentoring, some can be learned using computer-based courses, and others may require formal classroom training.

When the training needs and the method of training for each team member have been determined and documented, the Project Manager or Team Leader documents the Training Plan, including a training schedule (see Appendix II Project Plan - Human Resources/Team Development section). Subsequently the Project Schedule must be updated to reflect all added training tasks: when and where training will take place and who

will do it. The target date for completion of each team member's training program should be determined. As training takes place, the Project Manager should update the Training Plan with the names of the trainees and actual training completion dates. Not only will this help the Project Manager measure the success of the Training Plan, but it will also help him/her evaluate team members and prepare staff performance appraisals.

**Define Organizational Change Management Plan**

When planning the project, the Project Manager and Customer must consider the impact the resulting product will have on the Performing Organization. The organization must be prepared to accept and use the product once it is implemented. The Project Manager needs to define and document a plan to manage the changes to the organization that could occur as a result of implementing the product. This Organizational Change Management Plan becomes part of the Project Plan. Organizational change management must be explicitly planned if it is to be effective (see Appendix II Project Plan - Human Resources/Organizational Change Management section). The items to include as part of an Organizational Change Management Plan are:

- **People:** The plan must consider how the individuals using the product will be affected by its implementation. The organization may initiate reductions or expansions in the workforce, and shift rote clerical activities to automated processing; decision-making power may be distributed further down the chain of command, or even regionally. If specific job duties are being added or removed, staff reductions or increases are anticipated, or the organizational structure itself will change, the plan must identify the steps to be taken. For example, the human resources manager in the Performing Organization must be involved in planning for and performing many of these change management tasks. Labor/management committees, union representatives, and the external agencies involved may all need to be included in planning for such changes, depending on the scope of the changes.
- **Process:** The plan must consider how the product of the project will affect already existing business processes in the Performing Organization. Business processes may take advantage of streamlined workflows to reduce the flow of paper, or technology advances may enable electronic communications to more quickly deliver information. Procedures will need to be redesigned to align with the change. The new procedures may effect changes in the

way the Performing Organization develops, documents, and trains staff, and must be addressed in the Organizational Change Management Plan.

- **Culture:** The plan must consider how severe the project's "culture shock" will be. The Project Manager must determine how much the project will affect the Performing Organization's business strategy, established norms for performance, leadership approach, management style, approach to Customers, use of power, approach to decision making, and the role of the employee. Plans might include performing an assessment of the Performing Organization's "readiness for change," and include development of action plans to increase the organization's readiness and ability to adapt to change through education and training.

In cases where implementing a project will result in a significant change to the way an organization will conduct business, the Project Manager, Customer, and Project Sponsor must be able to anticipate when and how the major impacts will occur, and plan for the specific activities that will adequately prepare the Performing Organization.

### 3.2.8 Communications Planning

The Communications Plan is a document describing the means by which project communications will occur. The communication process must be bi-directional. The Project Manager must receive input from Project Team members and Stakeholders about their information and communications requirements, determine the best and most cost effective way in which the requirements can be met, and record the information in a formal, approved document. Similarly, the Project Manager must provide details to the team and the Stakeholders regarding the communications he/she expects to receive, and document these requirements in the plan.

The Communications Plan is developed early in the project management lifecycle. It must be reviewed regularly throughout the course of the project and updated as necessary to ensure it remains current and applicable. Part of the Communications Plan describes how communications will be managed.

Depending on the project, communications management may be informal or highly sophisticated. When deciding how to manage communications on a project, a Project Manager solicits information from the Project Team and Stakeholders. The Communications Plan is developed with the following areas to be considered:

- ❑ The information needed may come from different sources. Sometimes it is already documented in hard copy or electronic form, but sometimes it is conveyed during formal meetings, informal gatherings, or simple conversations. The Project Manager must be aware that this information exists and be prepared to convey it using the communications management plan. Some sources of project information. The sources of project information that may require communication including:
  - Status Meetings
  - Status Reports
  - Memos
  - Newsletters
  - Executive Correspondence
  - Meeting Notes
  - Executive Meetings
  - Steering Committee Meetings
- ❑ How often and how quickly information needs to be disseminated.
- ❑ By what means the Project Manager and Stakeholders prefer to receive information (via phone, email, paper).
- ❑ The communication mechanism currently used in the organization, and how it might be leveraged or improved.
- ❑ The effectiveness of communications in past projects and whether specific improvements were recommended.
- ❑ How project information will be collected and stored (including Records Retention requirements) and what procedures will be followed to disseminate the information. If an electronic filing structure will be used, someone must be responsible for its setup and maintenance.
- ❑ Levels of access/security to project information, especially how the North Dakota Open Records Law applies.

- The distribution structure, specifically detailing what, how, and when information will flow to Stakeholders. For Internal Stakeholders, communication channels currently established in the organization should be used. For External Stakeholders, different channels may be required for each discrete Stakeholder group. The team must decide when it should occur, what information should be communicated, and how it should be delivered. The distribution structure for External Stakeholders must take into account how the particular Stakeholder group will be affected by this project.
- The method by which information will be accessed if it is needed between regularly scheduled communications.

The methods and technologies used to communicate information may vary among departments or organizations involved in the project, and by Stakeholders. These differences must be considered when creating a Communications Plan. For example, will all departments have access to email, or will exceptions need to be made? Are there any other considerations that may affect or limit communication? For example, there may be regulatory or contractual obligations that will affect the means by which communication can take place.

 Conducting a status meeting regularly with your Customer is a great habit to adopt. Some items to discuss during the meeting include accomplishments, progress against schedules, work to be done, and any open issues that need resolution. If you plan to discuss a certain subject area during the meeting, don't be afraid to invite members of the Project Team with expertise in that area. It's also not a bad idea to invite other Stakeholders who have something constructive to contribute. Use the status report to drive the meeting discussion points (See Appendix I / Template H - Project Status Report). Remember, there can never be TOO MUCH communication!

As the project progresses certain events may occur that alter the way information is accessed or change communication requirements. For example, a department may move to a new building, allowing Project Team Members access to email for the first time. Or a change in personnel may dictate a change in the frequency of communications. During Project Planning and subsequent phases, the Project Manager should review the Communications Plan with the Project Team to be sure it is still viable. If it is determined that any portion of the plan is no longer applicable, the Project Manager must develop appropriate revisions to the plan.


Sometimes communications can break down. To try to avoid these disconnects, you should: 1) Be as concise and clear as possible in both written and verbal messages and 2) Solicit feedback to determine if your messages have been received by the appropriate parties and interpreted correctly. When there are problems, try to learn from them so that you can do better in the future.

### 3.2.9 Risk Management Planning

The goals of Risk Management are to predict the likelihood that a risk will occur, to quantify its potential impact on the project, and to develop plans for risk management.

**Identify Risks**

The Project Manager solicits input from the Project Team, Project Sponsor, and from Customer Representatives, who try to anticipate any possible events, obstacles, or issues that may produce unplanned outcomes during the course of the project. Risks to both internal and external aspects of the project should be assessed. Internal risks are events the Project Team can directly control, while external risks happen outside the direct influence of the Project Team (e.g., legislative action).

The list of risks created is entered into a Risk Management Log (see Appendix II Project Plan - Risk Management/Risk Management Plan section) and supplemented throughout the Project Planning Phase by any additional risks identified. Through Risk Analysis, information is added to describe the risk probability, impact, and response.

Reviewing the following areas can be helpful in identifying risks:

- ❑ Culture of the Performing Organization
- ❑ Anticipated impact on the Performing Organization of the resulting product or service
- ❑ The level to which the end result is defined (the more complete the definition, the lower the possibility of risk)
- ❑ Technology used on the project (proven vs. new)
- ❑ Relationships among team members
- ❑ Impact on work units/customers
- ❑ Known constraints
- ❑ Resources

Documentation associated with the Project can also be used to help identify risks. Some examples are:

- The Project Scope Statement and WBS may uncover previously unidentified areas of concern (again, the more complete the scope definition, the lower the possibility of risk);
- The Project Schedule may produce extremely aggressive or unrealistic scheduling;
- Preliminary staffing requirements may be problematic if required resources have limited availability or unique skills that would be hard to find and/or replace should they leave the project.
- The Business Case and Project Charter may include possible areas of risk.

Historical information can be extremely helpful in determining potential project risks. Data and documentation from previous projects, or interviews with team members or other subject matter experts from past projects provide excellent insight into potential risk areas and ways to avoid or mitigate them.

If the organization has a list of common project risks, it can be useful to ensure that the Project Manager has considered all potential risk elements in the current list. The Project Manager should update the organization's list as necessary based on the results of the current project.

**Risk Analysis**

The Project Manager and Project Team members evaluate each risk in terms of the likelihood of its occurrence and the magnitude of its impact. Both criteria should be quantified using a five-point scale: very high, high, medium, low and very low. These measurements are used as input into the Risk Management Log for further analysis when determining how the risk threatens the project.

There are many tools available to quantify risks. The Risk Management Log presented here has been selected for its simplicity and ease of use. More sophisticated tools may be necessary for large-scale high-risk projects.

A factor to be considered when quantifying risks is stakeholder risk tolerance, the threshold to which the Performing Organization will assume risk, which is dependent on its attitude toward and motivation for the project. For example, an agency may view a 15% chance of a project overrun as acceptable since the cost benefit for the organization to do

the project far outweighs this factor. The Project Manager's understanding of the organization's strategic direction and the motivation of both the Project Sponsor and the Customer will help determine the level of risk tolerance for the project.

**Risk Response Planning**

Next, the approaches for responding to each risk are developed and are added to the Risk Management Log. Actions can be taken to avoid, mitigate or accept each risk, depending upon the probability of its occurrence and the magnitude of its impact on the project. If a risk event can be anticipated, there should be sufficient opportunity to weigh consequences and develop actions to minimize its negative impacts or maximize its positive ones.

The Project Manager evaluates the results of the previous task to determine an appropriate response for each risk: avoidance, mitigation or acceptance. Each case will require a decision by the Project Team. The Project Manager is then responsible for communicating the steps necessary to manage the risk and following up with team members to ensure those steps are taken.

Identifying the risk is good; but planning a wise course of action around it is infinitely better. Be aware that by addressing one risk, you may be introducing another. For example: you identified a risk that your cost estimates may be off by as much as 15%. Your mitigation plan is to request a 20% increase in funds to cover the increased cost. You may have introduced a new risk, because a red flag may be raised, inviting an audit.

Since each risk may have more than one impact, the risk responses must describe the actions to be taken to avoid, mitigate or accept each risk impact, including contingency plans. It should also specify the individuals responsible for the mitigation actions or contingency plan execution. Attention should be directed to those risks most likely to occur, with the greatest impact on the outcome of the project. On the other hand, a conscious decision can also be made by the Project Team to accept or ignore certain risks. These decisions must be documented as part of the Risk Management Plan for subsequent re-evaluations.

Some commonly employed risk mitigation strategies may include:

- **Procurement** – some risks can be mitigated through procurement. For example, if the project requires staff with particular skills it may

be advisable to retain resources through an outside organization. Unfortunately, this may introduce other risk factors such as the resource's unfamiliarity with the agency.

- **Resource Management** – it may be beneficial to leverage a lead resource that has already worked on a project with similar characteristics by assigning that resource as a mentor to more junior team members. This will mitigate delays in the schedule due to the learning curve of more junior resources.
- **Use of Best Practices/Lessons Learned** – some organizations already have repositories of project specific or business function best practices, which may help you to prepare for unanticipated risks. Taking advantage of other project best practices, whether they are process or tool based, will help to mitigate risk. Implementing processes that have worked successfully on other projects will save time.

Last, and most important, the Risk Management Log must specify the individuals responsible for the mitigation actions, the timing of the actions to be implemented, and the expected results of the actions.

In addition to quantifying risk probability and impact and formulating risk responses, the risk assessment process facilitates establishment of an agreement for the Project Team, Project Sponsor and Customer Representatives to collaborate in managing risks as they arise during the project.

**Risk Management Plan**

The frequency with which the Risk Management Log will be monitored, reviewed and maintained, and the method of communicating progress of risk mitigation actions, must be incorporated into a Risk Management Plan (see Appendix II Project Plan - Risk Management/Risk Management Plan section). For example, the Risk Management Log should be reviewed at every status meeting, and updated with each change to the project.

When updating the Risk Management Log, maintain the original. Each revision should be kept to provide an audit trail demonstrating how the risks evolved throughout the project management lifecycle.

Throughout Project Planning and during Project Execution and Control, additional risk variables may be identified. Further refinement of the Project Scope may uncover areas of concern that were previously unknown. A more detailed schedule may introduce a new level of complexity and interdependencies to the project, possibly producing

more risk. More accurately defined staffing requirements may call for resources with unique skills whose availability may be diminishing. These are only a few examples of how risks in a project evolve over time, with the focus shifting from one risk source to another.

The Risk Management Plan should document how the Project Manager will verify the updated list of risks with the Project Team and Project Sponsor. Regular solicitation of input from experienced Project Team members and/or the Project Sponsor to uncover potential areas of risk and to help you identify what types of risks the Project Sponsor views as relevant. Jointly identifying and updating the risk variables for a project results in the sharing of risk awareness by all parties involved.

### 3.2.11 Procurement Planning

As the project is defined in each of the Planning Processes described throughout the previous pages, various resources that require procurement may be identified.

In State Government, when human resources, equipment, materials, or other non-human resources must be obtained, the Project Manager should contact the agency contract management office for assistance regarding state contract vendors, and procurement guidelines, as established by the State Procurement Office http://www.state.nd.us/csd/spo/. If technology or technology management services must be obtained, the technology procurement guidelines must be followed, which can be found at http://www.state.nd.us/itd/planning/tech.html.

In Higher Education, the established State Board of Higher Education (SBHE) and the North Dakota University System (NDUS) policies/procedures must be followed. Questions regarding procurement of non-human resources should be directed to your campus Purchasing Department. Questions regarding procurement of human resources should be directed to your campus Human Resources or Personnel Department.

Developing a Procurement Management Plan (see Appendix II Project Plan – Procurement Management Plan section) involves documenting

the above-mentioned steps and the procurement process to be used, in order to ensure the method is defined and reusable.

Regardless of how staff and products are acquired for the project, the Project Manager must add the estimated cost of all resources to the Budget Estimate.

### 3.2.12 Change Control and Issue Management Planning

**Define Change Control Process**

Every aspect of the project defined during Project Initiation and Planning has the potential to change. In fact, change should be expected to occur throughout every project phase; but if an effective change control process is defined and agreed upon during Project Planning, any change should be able to be handled without negative effect on the project outcome.

Project change is not defined simply as a change to the cost, end date, or Project Scope. Change should be defined as ANY adjustment to ANY aspect of the Project Plan or to ANY already approved deliverable(s). This includes anything formally documented in the Project Charter, Project Plan, or any deliverable produced during the course of the project.

The Project Manager and Customer Decision-Maker must agree on the change control process, which then must be formalized, documented, and included as a section in the Project Plan. Items that must be defined are:

- ❑ Identification of the individual(s) authorized to request a change.
- ❑ Identification of the person or group responsible for analyzing the request to understand its impact on the Project Cost, Scope, Schedule, and Quality, as well as the Customer Representative who has authority to approve the request. The Project Manager should never give the Project Team the go-ahead to begin work until a change request form has been signed by the Customer Decision-Maker. It should be noted that the impact to the Project Schedule must take into account time spent to analyze the change request.

 For changes that may have a more significant impact on the budget or schedule, the Project Sponsor (and/or Project Steering Committee) should be the ultimate approver of a change request. This presents a broader view of the issues and the consequences of the decisions.

- ❑ The timeframe (number of business days) allowed for a change request to be approved or rejected by the Customer. It is important to document the fact that approval or rejection by default is not permitted, so acceptance or rejection cannot be assumed if there is no response to a submitted change request.
- ❑ The process to follow if no timely decision on approval or rejection of a change request is made. The Project Manager should follow up with the person to whom it was submitted to determine why the change request has not been processed. If its identification as a change is disputed, the situation should become an open issue in the Project Manager's status report. The Project Manager should attempt to negotiate a compromise, but, if there is no resolution, executive intervention may be required.
- ❑ The percentage of the overall Project Budget that has been reserved for project changes. It is important to predetermine a change budget to prevent project work from being interrupted while funds are secured to do the work.

 As explained in the Budget Development Section, it is recommended to set up a change budget – (10 to 20% of the project total) for unforeseen eventualities. Alternatively, does your Project Sponsor enjoy "going to the well" time and time again to ask for additional funds? Do you enjoy writing justifications and groveling repeatedly? Enough said.

**Define Issue Management and Escalation Process**

Issue management involves capturing, reporting, escalating, tracking, and resolving problems that occur as a project progresses. A process must be in place to manage issues, since they can potentially result in the need for change control and can become major problems if not addressed (see Appendix II Project Plan – Risk Management/Issue Management Plan section).

The following items must be agreed upon between the Project Manager and Project Sponsor and must be documented and included as a section of the Project Plan:

- ❑ How issues will be captured and tracked – many Project Managers make use of some type of repository to ensure that issues are not lost. This repository may be either electronic or manual, depending upon the needs and size of the project. At a minimum, an issue

repository must contain: the name of the person who identified the issue (i.e. contact person), a description of the issue, its potential impact, the date it is recorded, the status of the issue (open/closed), its anticipated closure date, its priority, the name of the person responsible for resolving it or getting it resolved, and resolution comments. The due date for closure must be a specific date (i.e., the date cannot be "ASAP"). The responsible party must be a specific individual, not a functional group (i.e., an issue should not be assigned to the "IT Department").

As progress occurs on the resolution of an issue, the Project Manager should update the issue repository to reflect what has occurred. An issue log (whether electronic or paper-based) should be updated regularly, possibly as often as daily depending upon the needs of the project and issue resolution progress (See Appendix I / Template H - Project Status Report).

- How issues will be prioritized – the characteristics about the issue that will determine whether its resolution will be a high, medium or low priority. The impacts to the schedule, level of effort, or cost are usually the factors that determine the priority.
- How and when issues will be escalated for resolution – whether they will be escalated if they are not resolved in a given period of time or when a delivery date is missed or only when the Project Budget is severely affected. Whatever the decision, details of the escalation process need to be clearly stated. It is also vital to document to whom issues will be escalated.

### 3.2.13 Develop Project Implementation and Transition Plan

The Project Manager must formulate and document a plan for implementing or deploying the product of the project and for transitioning the responsibility for the outcome of the project from the Project Team to the Performing Organization. The Transition Plan must include all the necessary activities to perform and procedures to follow to ensure a smooth and satisfactory hand-off (see Appendix II Project Plan – Time Management/Implementation and Transition Plan section).

When planning the implementation and transition, the Project Team must consider the impact the resulting product will have on the Performing Organization and Consumers. The Consumers must be prepared to use the product and the Performing Organization must be prepared to support it.

The Project Manager needs to define and document a plan to implement the product, and should consider:

- What needs to be done to ensure the organization will be ready to receive the product. These steps may include acquiring the necessary physical space, installing appropriate software, obtaining the appropriate building permits, etc.
- How and when the Customer will test and accept the product and confirm and authorize its implementation.
- The steps to be taken to ensure Consumers will be ready to use the product once it is transitioned. These steps must be coordinated with the Organizational Change Management Plan, and will include training and orientation on the use of the product. They also may include plans for training Customers or Consumers as trainers for the future. The plan must define which of the Customer(s) require training, the level of training necessary, who will provide the training, and when it will occur.
- The appropriate strategy for implementing the product into the Performing Organization, given the specific Consumers and Customers. For example – phased by location, phased by specific product functionality, "big bang," etc.

The Project Manager should define and document a plan to transition the ongoing support of the product to the Performing Organization and should consider:

- The people from both the Project Team and the Performing Organization who need to be involved in the transition, and their associated roles and responsibilities. Examples include Customers, Consumers, and members of other specific support units within the Performing Organization.
- The steps that should be taken to ensure that the appropriate individuals are ready to support the product once it has been implemented and is in use. This may include negotiating with various internal organizations to determine the appropriate timing of the transition of responsibility, assigning specific organizations and individuals to support the specific products, and providing necessary training.
- The relationship between the implementation plan and the transition plan. The Project Team and the Performing Organization must agree on the point in implementation at which the Performing

Organization takes responsibility for production problems, "help" or trouble calls, and for resolving the problems.

- ❑ The Performing Organization's expectations regarding any documentation that is required as part of transition.

 Many otherwise successful projects fail due to a lack of transition planning. Don't let this happen to you! Ask 'do we have the resources to support the implemented product?' If the answer is no, the resources required to support the product should be identified and the cost/benefit analysis of the project should be revisited.

### 3.2.14 Establish Time and Cost Baseline

A time and cost baseline is a project "snapshot in time," taken at the conclusion of Project Planning, against which performance on the project is measured. It is one way the Project Manager can determine if the project is on track. Using the electronic Project Schedule, a baseline is captured or 'set.'

Once the baseline version is approved during the next process 'Confirm Approval to Proceed,' the Project Manager should revise it only if a change control is approved that results in a change to the schedule. The time and cost baseline becomes part of the Project Plan. As the project progresses, subsequent schedules may be compared to the baseline version to track project performance.

 If you revise the baseline as a result of change control, be sure to save the original baseline for historical purposes.

## 3.3 Confirm Approval to Proceed

### Purpose

The purpose of **Confirm Approval to Proceed to Next Phase** is to formally acknowledge that planning activities have been completed and that all deliverables produced during Project Planning have been completed, reviewed, accepted, and approved by the Project Sponsor. Formal acceptance and approval also signify that the project can continue into the next phase, Project Execution and Control.

**Roles for this Step**

Project Manager

Project Sponsor

Performing Organization

The acceptance and approval process is ongoing. As changes are made during Project Planning, the Project Manager should be in constant communication with the Project Sponsor. Keeping the lines of communication open will avoid a situation where a Project Sponsor is surprised by a deliverable or receives something he/she does not anticipate.

In addition, the Project Manager should review the interim deliverables or work products for each process with the appropriate Customer Decision-Maker upon their completion and gain approval before moving on to the next process. These interim acceptances should streamline the final acceptance process.

### Tasks

#### 3.3.1 Prepare Formal Acceptance Package

The Project Manager should schedule a meeting to discuss and gain agreement to approve the Project Plan, which could include the need to secure any additional Project Execution and Control resources.

**Tasks for this Step**

Prepare Formal Acceptance Package

Gain Approval Signature from Project Sponsor

Attendees should always include the Project Sponsor and the members of Performing Organization Management whose resources will be affected. Attendees may also include members of other agencies who are able to provide resources that will add value during Project Execution and Control.

In addition to reviewing the Project Plan, the Business Case should be reviewed because more information is now known about the project and the Business Case may need to be refined.

The Project Manager should organize these deliverables into a cohesive deliverable package and prepare a formal approval form.

 **Additional Project Planning Requirements for Large Projects:** Pursuant to STD009-98, large information technology projects must submit a copy of the Project Plan to the ITD Policy and Planning Division. For more information, refer to the ITD web site at http://www.state.nd.us/itd/planning/lar-pro-rep.html.

### 3.3.2 Gain Approval Signature from Project Sponsor

During the meeting, the Project Plan is approved and resources are formally secured by gaining the signatures of the appropriate Performing Organization managers on the Project Deliverable Approval Form (see Appendix I / Template I - Deliverable Acceptance Form).

At this point in time, the Project Sponsor may also decide to terminate the project. This decision may be based upon factors outside the control of the Project Manager (i.e., the organization may have new priorities that are in direct conflict with the project or increased risk may have been introduced to the project.) Or it is possible that, having done more detailed planning, the costs of doing the work are greater than initially estimated and outweigh any project benefits. Realistically, termination of a project could happen at any point during the project. The Project Manager must be comfortable and confident enough to approach the Project Sponsor at any time during the course of the project if he/she feels the project has reached a point where termination is the best possible solution.

## Project Planning End-of-Phase Checklist

**How To Use** - Use this checklist throughout Project Planning to help ensure that all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

**Figure 3-3 Project Planning End-of-Phase Checklist**

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| **Prepare for Project Planning** | | |
| Ensure team members have whatever is required to perform their tasks | | |
| Mentor or assign Team Leader to mentor new team members | | |
| Hold orientation sessions | | |
| Conduct kick-off meeting | | |
| Update the project repository with all project correspondence | | |
| **Perform Planning Activities and Develop the Project Plan** | | |
| Write the Project Scope Statement | | |
| Refine the Project Scope statement, breaking deliverables into smaller pieces of work | | |
| Clearly define each deliverable | | |
| Compile detailed descriptions of all work products and deliverables | | |
| Write description of scope change management | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Define and document acceptance management process | | |
| Create Project Schedule | | |
| Estimate effort and cost for each task and enter into schedule | | |
| Define dependencies among tasks | | |
| Calculate the project budget estimate | | |
| Develop staff and materials acquisition plans | | |
| Estimate costs of all resources | | |
| Initiate/address procurement | | |
| Review quality standards and revise as necessary | | |
| Identify organization's existing quality standards, if any | | |
| Identify and document quality standards for each deliverable | | |
| Risk Management Planning | | |
| Solicit input on risk identification from Project Team, Project Sponsor, and Customer Representatives | | |
| Analyze scope, charter, historical information | | |
| List all risks identified | | |
| Review identified risks with Project Team and Project Sponsor | | |
| Create Risk Management Log | | |
| Assess each risk (low/med/high) | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Estimate timing of impact on project | | |
| Determine mitigation actions | | |
| Incorporate actions in Project Schedule and Project Plan | | |
| Procurement Planning | | |
| Human Resources Planning | | |
| Create list of roles and skills required | | |
| Identify Internal and External Stakeholders | | |
| Outline Stakeholders' roles and responsibilities | | |
| Evaluate team member skills and identify training needs | | |
| Establish Training Plan | | |
| Define and document Organizational Change Management Plan | | |
| Write Communications Plan | | |
| Understand Stakeholder communication requirements | | |
| Define and document change control process | | |
| Define and document issue management and escalation process | | |
| Capture baseline Project Schedule (effort and cost) | | |
| Define and document Implementation and Transition Plan | | |
| Confirm Approval to Proceed to Next Phase | | |
| Review Business Case and refine, if necessary | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Review all deliverables from Project Planning | | |
| Organize deliverables into package | | |
| Prepare formal approval form | | |
| Present acceptance package to Project Sponsor for signature | | |
| Resolve any issues | | |
| Update package as needed to resubmit to Project Sponsor for signature | | |
| Gain Approval to Proceed | | |
| Update Lessons Learned | | |

## Measurements for Success

The ultimate measurement of success for Project Planning is that successful Project Execution follows, or a decision to stop the project as, once again, the organization may be best served by deciding that the project should not continue.

Nevertheless, the Project Manager can still assess how successfully the project is proceeding by utilizing the measurement criteria outlined below as it proceeds through Planning. More than one "No" answer indicates a serious risk to the continued success of your project.

**Figure 3-4 - Checklist for Measuring the Success of Project Planning**

| Process | Measurements of Success | Yes | No |
|---|---|---|---|
| Prepare for Project Planning | Do you have a proven Project Plan template from which to develop your Project Plan? | | |
| Perform Planning Activities and Develop the Project Plan | Has your Scope Statement been reviewed and accepted by Customer Representatives who will benefit from your project? | | |
| | Do your Customers understand the pre-determined acceptance criteria for all deliverables? | | |
| | In your Project Schedule, do you know if the effort allocated to various project phases correlate to industry-accepted norms? | | |
| | Is your Project Schedule defined according to the 80-hour Rule? | | |
| | Did you review the impact your project costs will have on upcoming fiscal year budgets with the Finance office? | | |
| | Have your staff and materials acquisition plans been reviewed with the Performing Organization who will be paying for the staff and products being acquired? | | |
| | Have the supervisors of all resources assigned to tasks on your project agreed to release those resources on the dates your project is expecting them? | | |
| | Do your Customers understand the pre-determined acceptance criteria for all deliverables? | | |
| | Do your team members have complementary skill sets, with no apparent gaps as per project approach? | | |

| Process | Measurements of Success | Yes | No |
|---|---|---|---|
| | If not, have you obtained authorization to provide them with necessary and timely training? | | |
| | Have the expenditures associated with your team Training Plan been approved? | | |
| | Has your Quality Management Plan been approved by the member of your organization responsible for quality assurance? | | |
| | Are your Internal and External Stakeholders satisfied with the frequency and content of communications you are providing (consistent with your Communications Plan) as evidenced by a lack of complaints? | | |
| | Have you proactively sought to gauge Stakeholders' Satisfaction level? | | |
| | Has the Project Sponsor reviewed your list of risks? | | |
| | Does your Project Sponsor agree with your risk prioritization? | | |
| | Do the other decision-makers agree with your risk mitigation actions? | | |
| | Do your Customers and Stakeholders agree with your definition of what constitutes a change? | | |
| | Have you verified that the folks responsible for signing off on change control items and deliverable approval forms actually have authority, and are willing, to approve the items of expected magnitude and type? | | |
| | Have the persons you identified as having authority for issue escalation agreed to serve in that capacity? | | |
| | Is your Project Sponsor sure that your organization will be ready to implement the product or service that your project will develop? | | |
| | Have you provided sufficient information in your Project Plan to allow the Project Sponsor to take the necessary action of approval? | | |
| Confirm Approval to Proceed | Do you have an approval form signed by your to Next Phase Project Sponsor authorizing you to proceed to Project Execution and Control, or halting the project? | | |

## Phase Risks / Ways to Avoid Pitfalls

Project Planning may afford the Project Manager the last opportunity to plan for the successes – and prepare for the disasters – that may follow. Once the Project Plan has been accepted (read: set in stone and put aside) the events will unfold in their own due course: following the plan (more or less), or arising spontaneously, haphazardly and perniciously to jeopardize it.

Your mission for this phase, should you choose to accept it, is to position the project so as to enable the former and impede the latter, or your plan will self-destruct in no time flat. What are some of the key elements of Project Planning that require the most attention? The following table identifies processes and tasks that are highlighted in this section.

**Figure 3-5 Importance of Project Planning Process - Avoiding Pitfalls**

| Process | Task | Why is it Important? |
|---|---|---|
| Prepare for Project Planning | Orient new team members | Choose your Impossible Mission Force wisely – they must be fully prepared and totally committed |
| Perform Project Planning Activities and Develop the Project Plan | Refine Project Schedule | The more impossible the mission, the greater the need for precise planning |
| | Risk Management Planning | It matters not what you know about the ambush, but what you will do to avoid, or overcome it |
| | Define Change Control Process | Who has the authority to change mission parameters? When and how? |
| | Define Issue Escalation and Management Process | What is your "exit strategy?" |
| Confirm Approval to Proceed | Gain Approval from Project Sponsor | Approval is required before the mission is executed |

**PITFALL #1 – YOU HAVE THE WRONG TEAM**

Before you get to play the leader, you first need to form your team. As a Project Manager appointed to a project, you probably think that you have very little latitude in selecting your team. Most likely, you are right – but it never hurts to try! And considering that these are the people who will define your success (flashback: what is the definition of "management?" – answer, getting work done through others) you should certainly make every effort to surround yourself with folks who not only have the right alphabet soup on their resumes, but also have the "right stuff" to form a high-performing team.

It is a hard, and maybe even a counter-intuitive lesson to learn, that the right combination of character and intelligence – or, in other terms, of attitude and ability to learn – is far more important than a particular type or even length of experience. Here are some pointers for selecting – and weeding out – team member candidates.

**1.** When selecting new team members, the first attribute to determine is aptitude. Whatever the technology or tools they will have to use, do they have a "knack," a natural inclination for it? Do they take to it, do they do it on their own time, do they innately like it? Have they chosen – and succeeded at it – in the past? No degree, no level of erudition or IQ, guarantees that a person has an aptitude for a given job. And if they don't – beware. No matter how hard they work, or how much they study – they will still not produce the same results as someone with an aptitude who seems to knock off tasks left and right with nary an effort.

**2.** The second desirable attribute is work ethic. Whatever your expectations are of the level of effort required on the project, you must be able to answer an emphatic "Yes!" to these two questions about each new team member: (1) in the normal course of events, will the person put in an honest day's work? and (2) when the circumstances require it, will the person do whatever it takes to get the job done? Both questions are equally important, and both demand an affirmative answer.

**3.** The third requisite attribute is versatility. Despite what you forecast on your schedule, and what you outline in roles and responsibilities, your team members will have to either substitute for one another, or perform some tasks you cannot currently anticipate. The team will need to be able to adapt to different circumstances and to learn new skills. Consequently, people who have a track record of performing well in disparate environments

are certainly preferable over fragile personalities who are thrown off their pace for a week when a time sheet format changes, or who cannot function unless they have the right view out their window. Likewise, folks who have a track record of learning new skills and techniques, especially on their own, are vastly preferable over the types who must attend weeklong vendor seminars (preferably in tropical locales) before they can be persuaded to learn anything new.

**4.** The fourth, and final, attribute to look for (and look out for!) is temperament (or disposition, or attitude, or character – whatever you want to call it). It makes a difference between enjoying camaraderie and synergism of a close-knit team and dreading coming to work in the morning.

Another way to "stack your deck" is to make sure you have the right combination of "types" for your team. Every team can benefit from one or more of the following:

- ❑ An "Eager Beaver." This is a person who typically has little experience with whatever technology your project is employing, but more than makes up for it in sheer persistence. You need these folks to carry the load.
- ❑ A "Guru." This is someone who knows everything there is to know about the subject, and is willing to teach anyone everything he or she knows; hopefully, the subject is what your team will actually need the most of. You need these folks to provide expertise and to solve real problems.
- ❑ A "Mother Hen." Male or female, this is a person who will remember everyone's birthday, take up collections for baby showers, and organize extracurricular team activities. Hopefully, they will have time left to do some actual work. You need these folks to maintain morale, provide team cohesion and balance the professional with the personal.
- ❑ A "Gadfly." Only in the sense of "acting as a constructively provocative stimulus" (The American Heritage Dictionary of the English Language, Houghton Mifflin), this person is indispensable in providing creative new ideas and challenging the status quo – when improvement is warranted. You need these folks to help the team come up with creative solutions, and to continuously improve the process.

- A "Leader." Finally, in addition to yourself, you need senior people on your team to inspire the other team members to accomplish their goals, as well as to hold them accountable when they don't.

**PITFALL #2 – YOU PLAN FOR SUCCESS. ONLY.**

Let's say you are going on vacation, driving through an unfamiliar area. As you are tuning the radio to a local station, you hear that there's a huge tie-up by Exit 11 of the route you're traveling on. You look up and see that you just passed Exit 10. What good is knowing about the obstacle at that point?

Would hearing the news at Exit 9 or earlier make a difference? Only if you had a local map and could plot your way around the obstruction.

But what if you knew, when you were first planning your trip, that Exit 11 on this highway was under construction? Would you not lay your course differently to avoid the delay?

So it is with risk mitigation. Identifying the risk is good; but planning a wise course of action around it is infinitely better. Planning mitigation actions ahead of time also removes the pressure of the moment, and allows you to clearly see the forest without bumping into the trees.

However, planning ahead for an eventuality that may or may not happen does not quite sharpen the mind with the same clarity that an immediate crisis does. It is not easy to be honest and tough, to avoid pat answers and rosy scenarios.

That's why it is useful to prioritize the risks first (using the Risk Management Log) and start working on the ones that have the greatest chance of sinking the project. The anticipation of a disaster ought to concentrate your mind on a realistic solution, and allow you to plot the best course of action around major obstacles.

**PITFALL #3 – YOU ARE OVERCOME BY CHANGE**

Some projects resemble the Blob from the eponymous 50's movie (and its unnecessary 80's remake): they absorb any obstacle in their paths, growing larger and less well defined all the time until someone finally puts them out of their misery (usually, by freezing the funds). Unfortunately, a lot of people get hurt in the debacle.

One way to avoid this fate is to know what the project is – and is not – and keep it that way. A good Project Plan is certainly a good start. But either according to the risk mitigation planning you did, or in totally new and unpredictable ways, one thing you can definitely count on during the course of the project: CHANGE WILL HAPPEN. And whether you are prepared for it or not, you will have to take actions that deviate from your Project Plan. However, by the very nature of the dutiful signoffs you so diligently pursued, you have no authority to undertake actions that deviate from your Project Plan!

That's where the Change Control Process comes in handy. You will need to know:

1. What constitutes a change
2. How to respond when a change occurs
3. Who can approve the new plan of action

What constitutes a change? Simply put – Anything that in any way deviates from the totality of your Project Plan as the Project Sponsor accepted it. If your project approach is not working – for whatever reason – and you need to modify it – it's a change. If your Project Scope changes (beware the scope creep!) – it's a change. If your Project Schedule needs to be modified – either up or down! – it's a change. If the quality standards in the agency change – it's a change. If the budget gets cut – it's a change. If you adapt a different communications mechanism because it works better – it's a change. If your Project Team composition changes – it's a change.

Of course, not all changes require the same level of response. It would be ludicrous to initiate a formal change control process and demand a sign-off when all you are asked to do is to change the date format on your status report. However, if you get fifty contradictory requests for formatting changes that effectively prevent you from getting your status report out on time – you may well need to wake the change control Cerberus.

All changes need to be documented, but it is useful to separate changes into two categories: those that affect the project's CSSQ (Cost, Scope, Schedule and Quality) and those that don't.

Just remember that an accumulation of tiny, seemingly insignificant changes can affect CSSQ just as much as one big obstacle: if you remain still long enough, piranhas can get you just as surely as sharks.

So your change control process needs to explicitly state that you will consider any variation to the Project Plan as a change, and will respond to it in one of two ways:

- Changes that do not affect CSSQ will be documented in your status report.
- Changes that affect CSSQ will trigger a change control process.

Finally, the change control process needs to explicitly define who has authority to approve a change. Usually, different people have the prerogative to approve changes of a different magnitude or kind. Having it clearly spelled out up front will save you many headaches later.

### PITFALL #4 – WHY CAN'T WE ALL JUST GET ALONG?

Your schedule is as tight as a drum; you've defined deliverables until no ambiguities remain; everyone knows what to expect and when. You think you are done? Only for as long as it takes one of the decision-makers to disagree with you. And disagree they will! The Customers will disagree that what you are delivering is what they had in mind "all along." The Stakeholders will disagree that they are not being adversely affected by the new product or service. Your own Project Sponsor – your purported guardian and protector – will disagree that the budget commitments were actually made for next year's budget.

When something like that happens, you need to be able to appeal to a "higher authority." Unfortunately, if you have not obtained the higher authority's OK, and others' concurrence, to appeal to them well ahead of time, you don't stand a chance.

You have to define, right up front, who will arbitrate when you and your Customer, you and your Stakeholder, and you and your Project Sponsor, have a difference of opinion and cannot negotiate a compromise. And the time to plan for it is early on, when you are still their best friend and you have no active issues at stake.

**PITFALL #5 – WE DON'T REALLY NEED TO FOLLOW ALL THESE STEPS, DO WE?**

In most PM-immature organizations, as soon as the project enters a phase when some real work needs to get done and real resources applied, the questions start:

- "Do we really need all this methodology junk?"
- "We should just concentrate on what REALLY needs to get done."
- "It's crazy to expect us to create all these deliverables!"
- "We don't have the luxury of making the plans look pretty."
- "Why do we need to do … (fill in any deliverable/process)."
- "We need to produce results – not waste time on 'methodology'."
- "If we produce all this make-work we will not have time to DO anything."
- Etcetera, etcetera, etcetera.

Of course, what these comments betray is a fundamental lack of understanding of what Project Management is all about. Project Management (as well as just basic Management) methodologies were developed, all over the world, in response to crises and disasters that resulted precisely from the kind of seat-of-the-pants approach that the doubters actually advocate. To cure the root cause of this attitude would take massive organizational re-education and PM "conscientiousness raising." Unfortunately, you (the "enlightened" Project Manager) don't have either time or authority for that.

What you can do, though, is to say "No" clearly, articulately and resolutely. No, you will not substitute a vague verbal statement of intent for a thoroughly written scope statement. No, you will not take a promise to "let you have our best people when you need them" instead of a signature on the Project Plan.

But let's be realistic – the pressure may get intense, and you may not have a choice. Your own manager, the Project Sponsor, or an influential Customer, may force your hand into short-changing your deliverables or skipping on your tasks. Your only recourse at that point is documentation. Document the specific risks to the project. Document the fact that a business decision was made to accept those risks.

Just don't become a willing accomplice in jeopardizing your own project. Don't "go along to get along." Resist organizational inertia and stick to your principles.

## Frequently Asked Questions

**When developing the Project Team, how do you handle different projects competing for the same resources that you have no administrative control over?**

In the fight for resources, you have two main allies – your Project Plan and your Project Sponsor. Make sure your Project Plan is well reasoned and detailed enough to specify and justify the number and caliber of resources that your project requires. Then, make sure your Project Sponsor agrees with you (not the least, by signing the Project Plan). Finally, use both to secure the resources the Greater Good of the Project demands. And if you still don't get them – which you may not depending on the priority of competing projects – document that fact, so when the project performance suffers, you have ample justification for the requisite change control.

**How much detail should be included in the definition of the deliverables? Should you keep it at a high level until more information is available?**

Getting an informed agreement on deliverables ahead of time is one of the most important things you can do to ensure the success of your project. Some of the biggest disconnects that sank many projects before yours involved Customers expecting one thing while the Project Team was developing another.

You should describe the deliverables in excruciating detail. You should dig up examples from other projects and use them to illustrate exactly what will be delivered. If no examples are available, you should prototype the deliverables as closely as possible. And finally, the Customer's signatures must be all over the deliverable descriptions.

Also keep in mind that as the project progresses, the format and/or content of the deliverables may "evolve." Make sure that the Customers are constantly updated as to the latest understanding of what will be delivered! See the "Project Black Box" Pitfall from the Execution and Control phase for more details.

**What do you do if the team training determined to be necessary cannot be completed within the required timeframe of the project?**

Well, it depends on what "necessary" means and who "determined" it. If you have training as a task in your Project Schedule, and Project Team members really cannot function without it, then you should invoke change control until they either get the training, or learn on the job. On the other hand, if you have people that can teach the tool, on-the-job

training may be a very viable option. The bottom line is, your resources must be able to produce the results you expect; if they cannot get to that point because of circumstances beyond your control, you have full right to invoke change control.

**What do you do when management is making a poor project decision that you as Project Manager feel will doom the project to failure?**

This impasse is most likely to occur when management initiates a change to Project Scope, pulls project resources, or alters Project Schedule. Your best course of action, after failing to persuade them of their folly, is to document your objections, including the analysis of the decision and its impact, alternatives you suggested, and all supporting research in a separate document and refer to it in an issues section of the Project Status Report. Subsequent status reports should track the impact of the decision, as well as projections for the potential of continued degradation if the project continues as is.

The best outcome is that as the project progresses, management realizes the impracticality of the situation, and makes changes to the scope, schedule or budget.

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# Chapter 4 - PROJECT EXECUTION AND CONTROL

## Purpose

The purpose of Project Execution and Control is to develop the product or service that the project was commissioned to deliver. Typically, this is the longest phase of the project management lifecycle, where most resources are applied.

Project Execution and Control utilizes all the plans, schedules, procedures and templates that were prepared and anticipated during prior phases. Unanticipated events and situations will inevitably be encountered, and the Project Manager and Project Team will be taxed to capacity to deal with them while minimizing impact on the project's Cost, Scope, Schedule, and Quality (CSSQ).

The conclusion of the phase arrives when the product of the project is fully developed, tested, accepted, implemented and transitioned to the Performing Organization.

Accurate records need to be kept throughout this phase. They serve as input to the final phase, Project Closeout.

## List of Processes

This phase consists of the following processes:

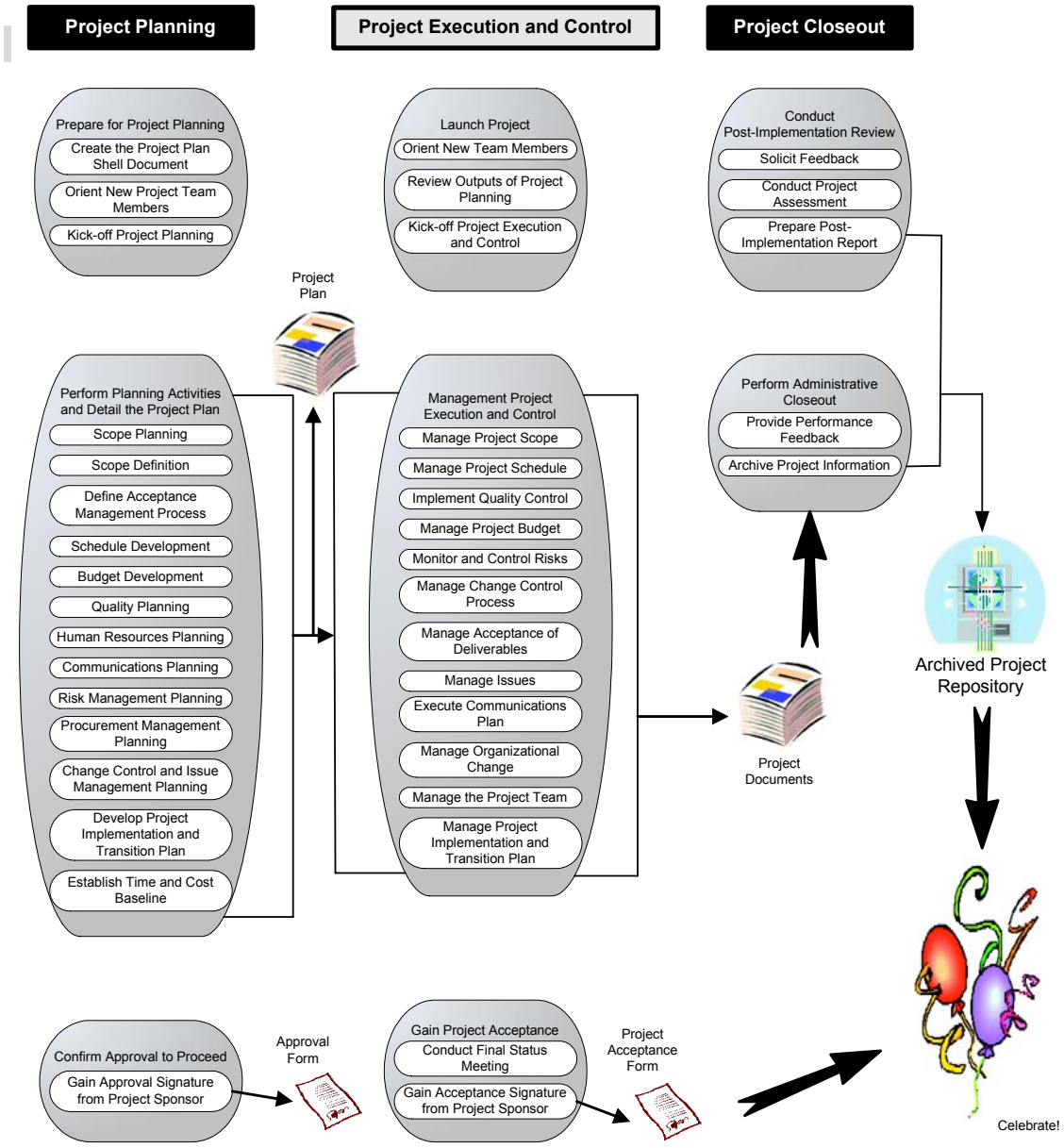
**4.1 Launch Project**, where the Project Manager conducts a meeting to formally begin the Project Execution and Control phase, orient new Project Team members, and review the documentation and current status of the project.

**4.2 Manage Project Execution and Control,** where the Project Manager must manage every aspect of the Project Plan to ensure that all the work of the project is being performed correctly and on time. This includes managing changes to the Project Scope and Project Schedule, implementing Quality Assurance and Quality Control processes according to the Quality Standards, controlling and managing costs as established in the Project Budget, and utilizing the Risk Management Plan.

**4.3 Gain Project Acceptance,** where the Project Manager, Customer Decision-Makers and Project Sponsor acknowledge that all deliverables produced during Project Execution and Control have been completed, tested, accepted and approved, and that the product or service of the project has been successfully transitioned to the Performing Organization.

The following chart illustrates all of the processes, tasks, and deliverables of this phase in the context of the project management lifecycle.

**Figure 4-1 Project Execution and Control in the Project Management Lifecycle**



## List of Roles

The following roles are involved in carrying out the processes of this phase. The detailed descriptions of these roles can be found in the Introduction.

- ❑ Project Manager
- ❑ Project Sponsor
- ❑ Project Team Member
- ❑ Customer
- ❑ Customer Representative
- ❑ Consumer
- ❑ Stakeholders

## List of Deliverables

Project Execution and Control differs from all other phases in that between phase kick off and project acceptance, all processes and tasks occur concurrently and repeatedly, and continue almost the entire duration of the phase.

Thus, the earlier concept of a "process deliverable" is not applicable to this phase, and even task deliverables are mostly activities, not products.

Of course, there is the ultimate phase deliverable – the product of the project, and it is formally recognized via the signed Project Approval Form.

Figure 4-2 lists all Project Execution and Control tasks and their deliverables. A deliverable is a measurable, tangible, verifiable product. The items in italics are *outcomes*, which are more similar to results versus tangible deliverables.

**Figure 4-2 Project Execution and Control Deliverables**

| **Processes** | **Tasks** | **Task Deliverables *(Outcomes)*** |
|---|---|---|
| Launch Project | Orient New Team Members | *Team Members Prepared to Work* |
| | Review Outputs of Project Planning | *Project Planning Outputs Reviewed* |
| | Kick Off Project Execution and Control | Kick-off Meeting Agenda<br>Kick-off Meeting Notes |
| Manage Project Execution and Control | Manage Project Scope | *Scope Under Control* |
| | Manage Project Schedule | Updated Project Schedule |
| | Implement Quality Control | *Quality Control Processes In Place* |
| | Manage Project Budget | Updated Budget |
| | Monitor and Control Risks | Updated Risk Log<br>Updated Issue Log<br>*CSSQ Managed* |
| | Manage Change Control Process | Updated CSSQ |
| | Manage Acceptance of Deliverables | Project Deliverable Approval Forms |
| | Manage Issues | Project Status Report |
| | Execute Communications Plan | Project Status Report and Other Communication Tools |
| | Manage Organizational Change | Organizational Change Processes Executed |
| | Manage the Project Team | *High Performing Team* |
| | Manage Project Implementation and Transition Plan | Product of the Project |
| Gain Project Acceptance | Conduct Final Status Meeting | Final Project Status Report |
| | Gain Acceptance Signature from Project Sponsor | *Signed Project Acceptance Form* |

## 4.1 Launch Project

### Purpose

The purpose of **Launching the Project** is to formally acknowledge the beginning of Project Execution and Control and facilitate the transition from Project Planning. Similar to Project Planning Kick-off, launching the project ensures that the project is still on track and focused on the original business need. Many new team members will be introduced to the project at this point, and must be thoroughly oriented and prepared to begin work. Most importantly, current project status is reviewed and all prior deliverables are re-examined, giving all new team members a common reference point.

| Roles for this Step |
|---|
| Project Manager |
| Project Sponsor |
| Project Team Members |
| Stakeholders |

### Tasks

#### 4.1.1 Orient New Project Team Members

As in Project Planning, the goal of orienting new Project Team members is to enhance their abilities to contribute quickly and positively to the project's desired outcome. If the Project Manager created a Team Member Orientation Packet during Project Planning, the packet should already contain an orientation checklist, orientation meeting agenda, project materials, and logistical information that will again be useful.

| Tasks for this Step |
|---|
| Orient New Project Team Members |
| Review Outputs of Project Planning and Current Project Status |
| Kick Off Project Execution and Control |

The Project Manager should review the contents of the existing Team Member Orientation Packet to ensure that they are current and still applicable to the project. Any changes needed to the contents of the packet should be made at this time. Once updated, packet materials can be photocopied and distributed to new team members to facilitate their orientation process. The Project Manager or Team Leader should conduct one-on-one orientation sessions with new members to ensure that they read and understand the information presented to them.

If the orientation packet was not created during Project Planning and new team members are coming on board, the Project Manager must

gather and present information that would be useful to new team members, including:

- ❑ All relevant project information from Project Origination, Project Initiation, and Project Planning
- ❑ Organization charts – Project Team, Customer, Performing Organization
- ❑ Information on Project Roles and Responsibilities
- ❑ General information on the Customer (what they do for a living!)
- ❑ Logistics (parking policy, work hours, building/office security requirements, user id and password, dress code, location of rest rooms, supplies, photocopier, printer, fax, refreshments, etc.)
- ❑ Project procedures (team member expectations, how and when to report project time and status, sick time and vacation policy)

### 4.1.2 Review Outputs of Project Planning and Current Project Status

Before formally beginning Project Execution and Control, the Project Team should review recent Project Status Reports and the Project Plan. At this point in the project, the Project Plan comprises all deliverables produced during Project Initiation and Project Planning:

1. Project Charter
2. CSSQ (Scope, Schedule, Quality Plan, Budget)
3. Risk Management Log
4. Description of Stakeholder Involvement
5. Communications Plan
6. Time and Cost Baseline
7. Change Control Process
8. Acceptance Management Process
9. Issue Management and Escalation Process
10. Project Organizational Management Plan
11. Project Team Training Plan
12. Project Implementation and Transition Plan

See the sections on Project Initiation and Project Planning for detailed descriptions of these deliverables.

This will serve to remind the team of what has been produced so far, to clarify understanding of the work to be produced during Project Execution and Control, and to again communicate the management processes that will be followed during the remainder of the project.

### 4.1.3 Kick Off Project Execution and Control

As described in Project Planning, a separate kick off meeting can be held to kick off Project Execution and Control. The Project Manager should determine the appropriate attendees and agenda, which is dependent on the size and complexity of the project (refer to Section 2.3 for more information about kick off meetings). See Appendix I / Template F for a sample agenda. Other items to cover during the meeting include:

- ❑ Introduction of new team members
- ❑ Roles and responsibilities of each team member
- ❑ Restating the objective(s) of the project and goals for Execution and Control
- ❑ Latest Project Schedule and timeline
- ❑ Communications Plan
- ❑ Project risks and mitigation plans
- ❑ Current project status, including open issues and action items

The goal of the kick-off meeting is to verify that all parties involved have consistent levels of understanding and acceptance of the work done so far, to validate expectations pertaining to the deliverables to be produced during Project Execution and Control, and to clarify and gain understanding of the expectations of each team member in producing the deliverables. Attendees at the Project Execution and Control Kick-off Meeting include the Project Manager, Project Team, Project Sponsor, and any other Stakeholders with a vested interest in the status of the project. This is an opportunity for the Project Sponsor to reinforce the importance of the project and how it supports the business need.

As at every formal project meeting, the Project Manager should be sure that one of the Project Team members in attendance is designated as the scribe for the session, to capture notes and action items. Following the session, the notes and action items should be compiled into meeting minutes to be distributed to all attendees for review and approval, and should be added to the project repository.

## 4.2 Manage Project Execution and Control

### Purpose

| Roles for this Step |
|---|
| Project Manager |
| Project Sponsor |
| Project Team Members |
| Customer Representative |

Project Execution and Control is typically the part of the lifecycle of a project when the majority of the actual work to produce the product is performed and the majority of the Project Budget is expended. The purpose of **Manage Project Execution and Control** is to manage every aspect of the project as work is being done to make certain the project is a success. The tasks in this process are performed concurrently and repeatedly as various aspects of the product of the project are constructed, tested, and accepted.

### Tasks

#### 4.2.1 Manage Project Scope

| Tasks for this Step |
|---|
| Manage Project Scope |
| Manage Project Schedule |
| Implement Quality Control |
| Manage Project Budget |
| Monitor and Control Risks |
| Manage Change Control Process |
| Manage Acceptance of Deliverables |
| Manage Issues |
| Execute Communications Plan |
| Manage Organizational Change |
| Manage the Project Team |
| Manage Project Implementation and Transition |

During Project Planning, the Project Manager, through regular communication with the Customer Representatives and Project Sponsor, refined the Project Scope to clearly define the content of the deliverables to be produced during Project Execution and Control. This definition includes a clear description of what will and will not be included in each deliverable.

The process to be used to document changes to the Project Scope was included in the Project Plan. This process includes a description of the way scope will be managed and how changes to scope will be handled. It is important that the Project Manager enforce this process throughout the entire project, starting very early in Project Execution and Control. Even if a scope change is perceived to be very small, exercising the change

process ensures that all parties agree to the change and understand its potential impact. Following the process each and every time scope change occurs will minimize confusion as to what actually constitutes a change. Additionally, instituting the process early will test its effectiveness, get the Customer and Project Sponsor accustomed to the way change will be managed throughout the remainder of the project, and help them understand their roles as they relate to change.

As part of managing scope change, one of the Project Manager's functions is to ensure that the project produces all the work but ONLY the work required and documented in the Project Scope. Any deviation to what appears in the scope document is considered change and must be handled using the change control process. Sometimes, despite the best effort of the Project Manager to carefully document what is in and outside of scope, there is disagreement between the Project Manager and Customer Representative or Project Sponsor regarding whether something is a change. When conflicts occur, the Project Manager and appropriate Customer must be willing to discuss their differences of opinion and reach a compromise. If a compromise cannot be reached, it may be necessary to escalate the issue to a higher level of management.

Once the Project Manager, the Project Sponsor, and the appropriate Customer Representative agree that scope change is occurring, they all must take the time to thoroughly evaluate the change. In order to effectively evaluate change, the Project Manager must forecast the impact of the change on the remaining three "quadruple constraints": Cost, Schedule and Quality. Equipped with this information, the Project Manager and Project Sponsor will be able to determine if implementing the proposed change would be beneficial. If it is determined, for example, that the cost of implementing a change outweighs the benefit, the change should most likely be rejected or put aside for future consideration.

When a scope change is determined to be beneficial to the outcome of the project, approval and funding for the change is secured. At this point, the Project Manager must follow the procedures defined in the Project Plan to implement the change. (Managing the change control process is described in detail in 4.2.6.)

Be wary of "Scope Creep". Scope Creep is the tendency of a project to include more tasks or to implement more systems than originally specified, which often leads to higher than planned project costs and an extension of the initial implementation date. Remember, a few minor changes can quickly add up to a major impact on your project.

The Project Manager must incorporate any agreed-upon changes or addenda into the deliverables produced during Project Initiation and Project Planning. This ensures that all project deliverables are in line with the revised Project Scope. Any lessons learned from scope change control should be documented and included in the project repository for later use by the current project and any other projects to be performed by the organization.

Throughout Project Execution and Control, continuous communication between the Project Manager, Project Sponsor, and Customer Representative is crucial in managing scope.

### 4.2.2 Manage Project Schedule

During Project Planning, an agreed-upon baseline was established for the Project Schedule. This baseline will be used as a starting point against which performance on the project will be measured. It is one of many tools the Project Manager can use during Project Execution and Control to determine if the project is on track.

Project Team members must use the communications mechanisms documented in the Communications Plan to provide feedback to the Project Manager on their progress. It is recommended that each team member prepare a Progress Report. This report documents effort spent on tasks and provides estimates of the effort required to complete them. Progress Reports are used by the Project Manager to update the Project Schedule. For an example of a Progress Report and instructions on how to prepare one, see 4.2.9, Execute Communications Plan.

The Project Manager must emphasize to the team the importance of accurate reporting, and must be vigilant in collecting information at a detailed level. Using the information contained in the Progress Reports, the Project Manager tracks work done against the tasks in the Project Schedule. If the time remaining to complete a task in the schedule differs from the estimated time, the schedule should be updated accordingly. It

is recommended that the Project Manager update the Project Schedule on a regular basis. Frequent updates to the schedule not only save time in the long run, they also allow the Project Manager to quickly spot potential problem areas. Small slippages on individual tasks may combine to create significant issues with other, dependent tasks.

After updating the Project Schedule, the Project Manager must take the time to review the status of the project. Some questions that the Project Manager should be able to answer by examining the Project Schedule include:

- ❑ Is the project on track?
- ❑ Are there any issues that are becoming evident that need to be addressed now?
- ❑ Which tasks are taking more time than estimated? Less time?
- ❑ If a task is late, what is the effect on subsequent tasks?
- ❑ What is the next deliverable to be produced and when is it scheduled to be complete?
- ❑ What is the amount of effort expended so far and how much is remaining?
- ❑ Are any Project Team members over-allocated or under-allocated?
- ❑ How much of the time allocated has been expended to date and what is the time required to complete the project?

Most project scheduling tools provide the ability to produce reports to display a variety of useful information. It is recommended that the Project Manager experiment with all available reports to find those that are most useful for reporting information to the Project Team, Customer, and Project Sponsor.

When updating the Project Schedule, it is very important that the Project Manager maintain the integrity of the current schedule. Each version of the schedule should be archived. By creating a new copy of the schedule whenever it is updated, the Project Manager will never lose the running history of the project and will also have a copy of every schedule for audit purposes.

The Project Manager should begin tracking actual work in the Project Schedule as soon as the work commences, which is usually as soon as the project is initiated and Project Planning begins. Work done in parallel with planning, before the Project Schedule is completed and approved, must be recorded. Remember that updates to the Project Schedule are

not limited to tracking hours worked – ANY change resulting from the execution of the change control process will usually require future tasks to be re-planned and the schedule to be updated! (see Manage Change Control Process, task 4.2.6) If the Project Schedule is updated to reflect approved change control, a new baseline schedule must also be created. Updates must then be made against the new baseline. The previous baseline should be saved for historical purposes.

### 4.2.3 Implement Quality Control

Quality control involves monitoring the project and its progress to determine if the quality assurance activities defined during Project Planning are being implemented and whether the results meet the quality standards defined during Project Initiation. The entire organization has responsibilities relating to quality, but the primary responsibility for ensuring that the project follows its defined quality procedures ultimately belongs to the Project Manager. Figure 4-3 highlights the potential results of executing a project with poor quality compared to a project executed with high quality:

**Figure 4-3**

| Poor Quality | High Quality |
|---|---|
| Increased costs | Lower costs |
| Low morale | Happy, productive Project Team |
| Low Customer satisfaction | Delivery of what the Customer wants |
| Increased risk | Lower risk |

Quality control should be performed throughout the course of the project. Some of the activities and processes that can be used to monitor the quality of deliverables, determine if project results comply with quality standards, and identify ways to improve unsatisfactory performance, are described below. The Project Manager and Project Sponsor should decide which are best to implement in their specific project environment.

- **Conduct Peer Reviews** – the goal of a peer review is to identify and remove quality issues from a deliverable as early and as efficiently as possible. A peer review is a thorough review of a specific deliverable, conducted by members of the Project Team who are the day-to-day peers of the individuals who produced the work. The peer review process adds time to the overall Project Schedule, but in many project situations the benefits of conducting a review far outweigh the time considerations. The Project Manager must evaluate the needs of his/her project, determine and

document which, if any, deliverables should follow this process, and build the required time and resources into the Project Schedule.

Prior to conducting a peer review, a Project Team member should be identified as the facilitator or person responsible for keeping the review on track. The facilitator should distribute all relevant information pertaining to the deliverable to all participants in advance of the meeting to prepare them to participate effectively. During the meeting, the facilitator should record information including:

- Peer review date
- Names and roles of participants
- The name of the deliverable being reviewed
- Number of quality issues found
- Description of each quality issue found
- Actions to follow to correct the quality issues prior to presenting the deliverable to the approver
- Names of the individuals responsible for correcting the quality issues
- The date by which quality issues must be corrected

This information should be distributed to the Project Manager, all meeting participants, and those individuals not involved in the meeting who will be responsible for correcting any problems discovered or for producing similar deliverables. The facilitator should also solicit input from the meeting participants to determine if another peer review is necessary. Once the quality issues have been corrected and the Project Manager is confident the deliverable meets expectations, it may be presented to the approver.

- **Use Quality Checklists** – both the Project Manager and Project Team members can create and make use of various checklists to be sure items are not overlooked while a product is being developed. Checklists may be simple hardcopy lists of "things to do," or may be generated using more formal, electronic-based tools. In either case, a checklist should be comprehensive and detailed enough to ensure that the resulting product or deliverable has been built to the level required to meet quality standards. An example of a

quality checklist is the End-of-Phase Checklist found at the end of each project management lifecycle phase in this ***Guidebook***.


Checklists can be refined and expanded over the course of several projects. This is a great way to reuse best practices and maintain historical information.

- **Maintain and Analyze the Project Schedule** – this activity should never be taken lightly, regardless of the size of the project. Updating the Project Schedule on a regular basis while keeping a close watch on the timeline and budget is the primary mechanism to measure quality of the schedule. If the project timeline or budget are not on track, the Project Manager can determine why and take immediate action to remedy the problem (see Manage Project Schedule, task 4.2.2).

- **Conduct Project Health Checks** – the goal of a project health check is to ensure that the Quality Assurance activities defined in Project Planning are being implemented and to determine whether quality standards are being met. It is a process to note what is being done well, to identify real or potential issues, and to suggest ways for improvement. Health checks should be performed on a regular basis, depending upon the size and length of the project. At a minimum, it is recommended that a health check be performed at the end of each phase, at lease once during Project Execution and Control, and at the end of the project.

  The individual(s) performing the health check can be a member of a quality assurance department or team, if one exists, or any Stakeholder determined by the Project Sponsor to be unbiased toward the project. The individual should also be very familiar with the quality standards and procedures in place in the Performing Organization, but should have no involvement in day-to-day project activities.

  An auditor will most likely use a checklist questionnaire to interview the Project Manager, selected Project Team members, the Project Sponsor, and selected Customer Representatives to gain insight into how the project is progressing. One of the most important measurements the auditor will look for during these interviews is Project Team and Customer satisfaction. Poor satisfaction is an indicator of an underlying problem that should be uncovered as the auditor delves into the specifics of the project. In addition, the project repository will be examined to determine if it contains

sufficient documentation. An auditor will look for and review the components of the current Project Plan – including the Project Scope, Project Schedule, and Risk Management Log.

Upon completion of the audit and repository review, the auditor writes a summary report documenting his/her findings and recommendations. This report is reviewed with the Project Manager, who should immediately implement recommendations and corrective actions identified.

Every member of the Project Team must be committed to producing a quality product. Quality control cannot rely on "adding" quality at the end of a process; quality must be built into the work of each individual on the team. It is far more cost effective to have Project Team members add quality into their day-to-day jobs than to have an auditor find a problem after a process has been completed.

As a result of implementing quality control, the Project Manager should be able to determine and take the appropriate actions to increase the project's effectiveness and provide better service to the Customer.


Successful quality control processes always strive to see quality through the eyes of the Customer. The Customer is the ultimate judge of the quality of the product.

### 4.2.4 Manage Project Budget

The Project Manager must know the extent of his/her authority to make budget decisions. For example, is the Project Manager allowed to authorize work that requires additional hours of salaried personnel time, or must employee time extensions go through the same approval process as contract personnel or equipment purchases? Often, the Project Manager must work closely with fiscal and contract personnel in other divisions to track and control costs. These relationships must be established early in the project management lifecycle.

Part of the Project Manager's job is to ensure that the project is completed within the allocated and approved budget. Budget management is concerned with all costs associated with the project, including the cost of human resources, equipment, travel, materials and supplies. Increased costs of materials, supplies, and human resources, therefore, have a direct impact on the budget. Just as task duration estimates are tracked carefully against actuals, the actual costs must be tracked against estimates. The same analysis should be conducted and the same questions asked: What other aspects of the budget were

constructed based upon these estimates? Changes to the scope of the project will most often have a direct impact on the budget. Just as scope changes need to be controlled and managed, so do changes to the Project Budget.

It is the responsibility of the Project Manager to closely monitor the financial performance of the project and take responsibility for addressing cost-related issues as they arise. In addition, the Project Manager should always be aware of the effect his/her decisions may have on the total cost of the project, both before and after the product or service is implemented.

Monitoring the financial performance of your project on a regular basis is the only way you can keep a handle on the Project Budget. Don't let the Project Budget get away from you – get into the habit of updating the schedule and analyzing the financial impact on a regular basis. Taking the time to do these administrative tasks will save you countless hours of reconciliation and balancing down the road, and warn you of impending cost issues.

There are several financial characteristics the Project Manager should monitor to determine if a project is performing satisfactorily against its budget. Most often, these values are entered into the scheduling tool by the Project Manager and calculated and displayed using its corresponding capabilities. Some budget-related characteristics the Project Manager should examine each time the schedule is updated include:

- **Original Contract Value:** the original estimated budget (cost) that was approved by the Project Sponsor.
- **Total Approved Changes:** the total cost of approved changes as a result of change control.
- **Total Current Budget:** the sum of the Original Contract Value and the Total Approved Changes. This is the most current approved Project Budget.
- **Cost to Date:** the actual dollars (cost) expended to date on all tasks and materials in the Project. The labor costs can be calculated by the scheduling tool based upon the time the Project Manager tracks against the tasks in the project Schedule.
- **Estimate to Complete:** the dollars (cost) estimated to be expended to complete remaining project tasks. The Project Manager must

verify and assess the impact of team members' revised effort estimates to complete tasks. The Project Manager must also validate that the remaining material costs are in line with the budget. These have a direct effect on the Project Budget.

- **Forecast Total:** the sum of the Cost to Date and the Estimate to Complete.
- **Project Variance:** the difference between all estimated and all actual dollars. It is calculated by subtracting the Forecast Total from the Total Current Budget. A positive variance means that the actual cost of the product is less than the budgeted cost. A negative variance means that the actual cost of the product is greater than the budgeted cost.


It is of utmost importance for the Project Manager to take the time to analyze, understand, and document the reason for variance every time the Project Schedule is updated.

Whether positive or negative, the Project Manager needs to understand what is causing variance and take proactive steps to keep it under control. The Project Manager must be able to explain the cause of variance to others and determine if corrective actions need to be taken to maintain the project's budget. For example, if a negative effort variance develops while a task is being executed, then more money may be needed than originally planned for, potentially impacting the success of the project. On the other hand, some tasks may finish ahead of schedule, freeing up money and offsetting the negative impact of those that finish late. The Project Manager must remain aware of such situations, working with the Project Team members and Customers to determine the causes of variance and to mitigate any associated risks.

It is the responsibility of the Project Manager to ensure the currency, accuracy, and viability of the Project Schedule as the primary mechanism for managing the budget. He/she must know and be able to communicate exact project status relative to budget, impact of changes, estimates to complete, and variance. This information must be known by task, process, phase, resource, and deliverable and be communicated to the Project Sponsor as part of the Status Meeting.

### 4.2.5 Monitor and Control Risks

**Monitor Risks**

During Project Initiation and Planning, risks were remote events with uncertain probabilities of coming true. In Execution and Control, however, impact dates draw closer, and risks become much more tangible.

The Project Manager must continually look for new risks, reassess old ones, and re-evaluate risk mitigation plans. The Project Manager should involve the whole Project Team in this endeavor, as various team members have their particular expertise and can bring a unique perspective to risk identification. As the Risk Management Log is integrated into the status reporting process, this review and re-evaluation should take place automatically, with the preparation of each new status report.

Because the Risk Management Log places risks in order according to their priority level, it is important to update all quantifiable fields to portray an accurate risk landscape. The risk probabilities may have changed; the expected level of impact may be different, or the date of impact may be sooner or later than originally anticipated – all of these variables determine which risks the Project Team will concentrate on first.

Likewise, the Risk Management Plan needs to be constantly re-evaluated. Make sure the right people are still assigned to mitigation actions and that the actions still make sense in the context of the latest project developments.

Another consideration is whether a specific risk's probability level is high enough to warrant incorporating the Risk Management Plan in the Project Schedule via the change control process. If so, the risk should be removed from the log.

Finally, the Project Manager must be constantly on the lookout for additional risks. Reviewing the risks as part of regular status reporting should involve the whole Project Team via bi-directional communications.

**Control Risks**

Sooner or later, one of the events on the Risk Management Log – or an entirely new and unexpected risk – will actually occur. The Project Manager and Project Team members must evaluate the risk event and

invoke the Risk Management Plan. There are generally three possible response scenarios:

1. If the risk occurred as expected, the existing Risk Management Plan may be adequate for dealing with it.

   Example: the project is being required to provide additional documentation to prove compliance with state regulations. However, that risk has been anticipated, and the Risk Management Plan details where and how to get the appropriate materials.

2. If the risk occurred in a different manner, or other circumstances have come to bear, the Risk Management Plan may have to be modified. Example: a consumer group brought pressure to examine the environmental impact of the product of the project more closely. As a result, the project is being required to obtain subject matter expert statements. Since the need was not anticipated, the original contingency plan needs to be modified to comply with the new requirements.

3. If the risk event was unexpected and unanticipated, a whole new Risk Management Plan must be created to address it. Example: The Federal Government issued a mandate that challenges the project from a whole different perspective. The Project Manager needs to understand what the issue is, what response is required, and how to obtain the desired result.

Regardless of the scenario, however, as soon as the risk event occurs it ceases to be a risk (future, possible event) and becomes an issue (current, definite condition). As a result, it should transition from the Risk Management Log and onto the list of current project issues, with the Risk Management Plan becoming the issue's Action Plan.

**Monitor Impact of Risk on CSSQ**

During the entire risk management process, the Project Manager should be especially vigilant regarding the effect on the project's Cost, Scope, Schedule and Quality (CSSQ). With the proper risk management processes in place, many risk events may come to pass without affecting (either positively or negatively) the project's defining parameters. However, when a risk event occurs that threatens the project's scope, quality standards, schedule or budget, the Project Manager must determine the proper course of action to protect the integrity of the project.

Until CSSQ impact is certain, the Project Manager must, at a minimum, introduce the event to the list of current project issues. The issue's Action Plan must reflect all the tasks required to accurately determine what impact (if any) the event will have on CSSQ. Once the impact is certain and quantifiable, the Project Manager should transition the issue to the Change Control process.

### 4.2.6 Manage Change Control Process

During Project Planning, the Project Manager, Project Sponsor, and Customer agreed on a formal change control process that was documented and included in the Project Plan. The change control process describes:

- ❑ The definition of change and how to identify it
- ❑ How requests for change will be initiated
- ❑ How requests for change will be analyzed to determine if they are beneficial to the project
- ❑ The process to approve or reject change requests
- ❑ How funding will be secured to implement approved changes

Although changes can be expected to occur throughout every project phase, any negative effect on the project outcome should be avoidable if the change control process is executed and managed effectively.

The need for change is usually discovered during Project Execution, as actual task work is being performed. It is during Execution that the Project Team may discover their original effort estimates were not accurate and will result in more or less effort being required to complete their work. It is also during Execution that the Project Sponsor or Customer may realize that, despite their best efforts to thoroughly document the Project Scope, the product being produced is not exactly what they need. It is the responsibility of the Project Manager to keep a close watch on factors that could introduce potential "scope creep" and take proactive steps to prevent it from occurring, or to manage it as it occurs.

Sometimes change control is required if a Project Team member is not able to complete what was documented in the Project Scope, because of lack of skill, time constraints, or other factors outside his/her control. In most cases, these difficult to manage situations often result in lost time in the Project Schedule and can have a major impact on the project.

When someone does not do something he or she was supposed to do as documented in the Project Plan, the resulting change is called a "Non-Compliance" change.

Sometimes change is simply informational and will most likely not affect the Project Scope or Schedule (e.g., the name of a Project Team member or the physical location of the Project Team offices may change). Changes that do not affect the project's CSSQ do not need to follow the formal change control process, but should be documented in the Project Status Report or any other appropriate communication mechanism.

However, for all changes that affect the project's CSSQ, it is vitally important for the Project Manager to implement and manage the change control process in every situation. Not doing so will cause confusion on the part of the Customer as to what constitutes a change. The change control process also helps maintain balance between the requirements of the project and the timeline and cost.

During Project Planning, individuals authorized to be requestors, reviewers, and approvers of change requests were identified and information about them was documented in the change control process. Change control begins when a requestor completes a change request form and submits it to the appropriate reviewer(s).

The role of the reviewer(s) in the change control process is to analyze the request in terms of the level of effort and skill required to implement it. The reviewer, typically an expert in the subject area, will also make a recommendation to accept or reject the change request based upon its feasibility from a technical or implementation standpoint. He/she will communicate this information to the Project Manager and document it on the Project Change Request.

One of the roles of the Project Manager in the change control process is to analyze the reviewer's recommendation, and determine the overall effect of the requested change on the Project Schedule in terms of effort, cost, and resource requirements and availability. This information will be documented on the Project Change Request and presented to the approver(s).

The approver(s) review the information and make a determination whether to approve the change request based upon the potential benefit of its implementation to the organization. If, for example, the implementation costs far outweigh the business benefit, the change request will most likely be rejected. A signature is required of all

approvers, whether they are accepting or rejecting the request. If the request is being rejected, the approver must provide a reason. A signature of approval on the Project Change Request indicates that the approver accepts the consequences (impact) of the request on the project's Cost, Scope, Schedule or Quality.


NEVER execute a change request without first obtaining all required approval signatures!

Once a change request has been approved, the Project Manager must incorporate the effect of the change into the Project Schedule. All affected tasks, estimated durations, dependencies, and resources must be modified. A new baseline should then be created for the amended schedule and budget. These become the new tools against which hours will be booked and project performance measured going forward.


REMEMBER: Make a copy of the new baseline schedule and archive it in the project repository BEFORE you book new work to it! If you lose the baseline, you have nothing against which to compare later updates to see if your project is on track!

In addition, if new deliverables will be produced as a result of the change, their exact description must be included in the Project Plan, either as appendices to the Project Scope, or as separate attachments. In addition, any changes that affect the remaining components of CSSQ must be documented. All correspondence, supporting documentation and other information pertaining to the change should be saved in the appropriate location in the project repository.

### 4.2.7 Manage Acceptance of Deliverables

The goal of this task is to manage the acceptance of deliverables according to the acceptance management process developed during Project Planning. The acceptance management process is part of the Project Plan, and documents:

- ❑ The definition of "acceptance"
- ❑ The criteria that must be met for each deliverable to be considered "acceptable"

- ❑ The number and identity of Customers designated to be reviewers of each deliverable – typically reviewers are experts in the subject matter the deliverable covers
- ❑ The number and identity of Customers designated to be approvers – approvers have the authority to sign the approval form, indicating acceptance
- ❑ The number of business days in which deliverables must be either approved or rejected by the reviewers and approvers
- ❑ The number of times a deliverable can be resubmitted
- ❑ The escalation process that will be followed if a timely decision on approval or rejection of a deliverable is not met

The acceptance management process must be followed throughout the project. As with the change control process, the earlier in the life of the project the process begins, the sooner everyone will understand how it works and what to expect. The key to facilitating acceptance is first to understand Customer expectations, and then to meet them.

The acceptance management process is not set in stone. If, while executing the process, you discover parts of it are not working as expected, adjust the process to more closely fit the needs of the project. Just be sure to document your changes and get Customer approval before implementing them.

Acceptance begins when the Project Manager presents a completed deliverable and Project Deliverable Acceptance Form to the approver (see Appendix I / Template I - Deliverable Acceptance Form). When logistically possible, the Project Manager must take the time to formally review the deliverable, in person, with the approver. In some cases, the approver's geographic location or work shift prohibits face-to-face communication. Where in-person communication is feasible, it is recommended that the Project Manager not simply send the deliverable via email or leave it on the approver's desk. If the Project Manager has done a very thorough job in setting expectations, the approver may indicate acceptance at the end of this face-to-face presentation. More likely, however, the approver will prefer to have designated reviewers examine the document or product and recommend a course of action.

The reviewers independently analyze the deliverable and produce a recommendation as to whether to accept the deliverable, providing their comments and signature on the accompanying approval form. This must

be done within the turnaround time documented in the acceptance management process. If a reviewer recommends the deliverable be rejected, he/she must provide the reason and forward the package back to the approver. This process should be followed for each person designated as a reviewer in the acceptance management process.

Keep in mind that the review and approval process will take more time if several reviewers or approvers need to get involved!

Using input and recommendations provided by the reviewer, the approver reviews the deliverable and decides if it meets the acceptance criteria documented in the acceptance management process. He/she will indicate acceptance or rejection of the deliverable on the Project Deliverable Approval Form. Once again, this must be done within the turnaround time documented in the acceptance management process. If the approver recommends the deliverable be rejected, he/she must provide the reason and forward the package to the Project Manager. It is then the responsibility of the Project Manager to have the deliverable adjusted as necessary and then resubmit it to the approver. This process should be followed for each person designated as an approver in the acceptance management process. The Project Manager must ensure that for rejected deliverables, specific corrective actions are defined, i.e., "I would accept this if..."

It is the responsibility of the Project Manager to be cognizant of the time elapsing during the review and approval process, in an attempt to complete the process within the maximum number of business days agreed upon and documented. Significant delays in the process should trigger the Project Manager to escalate the situation, following the documented escalation procedure. Similarly, the Project Manager should be aware of the number of times the acceptance process is being repeated. How many times is the Project Team making changes to a deliverable based upon its rejection? The number of times a deliverable can be resubmitted to the approver was also documented in the acceptance management process. If a deliverable is rejected more than once, the Project Manager should take immediate action to analyze the situation, resolve the conflict, or exercise the appropriate escalation procedure to get it resolved. A serious delay in the acceptance of a deliverable will almost always result in project delays.

If the number of iterations becomes unreasonable, the Project Manager should recognize that a bigger problem may exist, and should take the appropriate action to find out what it is and fix it!

The Project Manager should maintain a log of the activity that transpires while a deliverable is going through the acceptance management process. The deliverable acceptance log can be included as part of the Status Report that is reviewed with the Project Sponsor (See Appendix I / Template H - Project Status Report).

Once a deliverable is considered acceptable, the Project Manager should gain the appropriate signatures on the Project Deliverable Approval Form. Signatures on the form indicate formal acceptance of the deliverable. Place the signed deliverable approval form into the project repository.

### 4.2.8 Manage Issues

Managing issues involves documenting, reporting, escalating, tracking, and resolving problems that occur as a project progresses. During Project Planning, the Project Manager and Project Sponsor agreed upon and documented the process for managing issues and included the process in the Project Plan.

The issue escalation and management process addresses the following:

- ❑ How issues will be captured and tracked
- ❑ How issues will be prioritized
- ❑ How and when issues will be escalated for resolution

Issues are usually questions, suggestions, or problems raised by Project Team members, including the Project Manager and Customer. They are different from changes in that they do not usually have an immediate impact on the Project Scope or Schedule. If issues remain unresolved, however, they are likely to affect the Project Schedule or Budget, resulting in the need for change control. It is, therefore, very important to have an issue escalation and management process in place, and to execute the process before change control procedures become necessary.

Anyone involved in a project in any way can and should inform the Project Manager of issues. It is the responsibility of the Project Manager and Project Sponsor to foster an environment where communicating issues is not only acceptable but strongly encouraged. Individuals should

feel a responsibility to the organization to voice their concerns. If individuals are fearful of communicating issues, the resulting effect on the project can be devastating.

The Project Manager should be cautious about reacting to an issue that is communicated by "shooting the messenger." This sends the wrong message to the Project Team. No matter how devastating the news or the issue, the Project Manager should thank the person who raised the issue and solicit ideas from that individual and other team members for its mitigation.

The Project Manager is responsible for capturing and tracking issues as soon as they arise, using the issues log section in the Project Status Report. Issues with the potential to impact Scope, Schedule, Cost, or Quality should be documented in the report (See Appendix I / Template H - Project Status Report).

Below are some examples of project issues:

- Computer system will be down for routine maintenance
- Project Sponsor is taking another job
- Project Team member start date may be sooner (or later) than expected
- There is a delay in approving or rejecting a change request or deliverable
- Severe weather is predicted in the area of the building site

Once the description of a new issue has been logged, the Project Manager should estimate the potential impact the issue could have on the project. Based upon potential impact, the Project Manager prioritizes the issue in relation to all other open issues. The goal of issue management is to resolve all concerns completely and promptly, but in reality the issues with the highest priority should be addressed first.

The issues log should also include the date the issue is recorded, its anticipated closure date, and the name of the individual responsible for resolving it or seeing that it is resolved. The due date for closure must be a specific date (i.e., the date cannot be "ASAP"). The responsible party must be a specific individual, not a functional group (i.e., an issue should not be assigned to the "IT Department" or the "DBA group").

While the issue remains open, its continuing impact and the status of its action plan should be discussed at every status meeting. If appropriate resources or materials are not available to complete the action items, or if there is disagreement about any of the elements on the issues log, the Project Manager should invoke previously-defined escalation procedures. Unresolved issues are one of the leading causes of project failure, and the Project Manager must pursue issue resolution relentlessly.

As progress occurs on the resolution of an issue, the Project Manager should update the issues log to reflect what has occurred. As issues are closed, they should be moved to a different section of the issues log. Along with a description of how the issue was resolved, the Project Manager should document who resolved the issue and the closure date.

When managing issues, document EVERYTHING (yes, EVERYTHING) that happens as issues are resolved. Be sure to note what happened, when it happened and who was involved. Don't skimp on the details. Keep an issues "diary."

When issues are closed, don't delete them from your issues log – instead maintain the "diary" of closed issues in a separate file or folder or section of the log. This "diary" will ensure that you cover your bases, and the information included in it may become invaluable to you or another Project Manager as lessons learned when resolving similar issues down the road!

### 4.2.9 Execute Communications Plans

During Project Planning, the Communications Plan was refined to describe how project communications will occur, and expanded to describe the way communications will be managed. As a project progresses, events may occur to alter the way information is accessed or change communications requirements. During Project Execution, the Project Manager and Project Team must again review whether the Communications Plan is still current and applicable to the project. If it is determined that any portion of the plan is no longer applicable, the Project Manager should update the document.

During Project Execution the Communications Plan is carried out so that required information is made available to the appropriate individuals at

the appropriate times, and new or unexpected requests receive a prompt response. Communications must continue to be bi-directional during Project Execution. The Project Manager must provide required information to the Project Team and appropriate Stakeholders on a timely basis, and the Project Team and Stakeholders must provide required information to the Project Manager.

In addition to having a solid Communications Plan in place, it is the responsibility of members of the Project Team to exercise good communication skills. When composing correspondence, progress reports, meeting minutes, etc., and when speaking with individuals face to face, the team members are responsible for clear, unambiguous, and complete communication of information. The receiver, in turn, must be sure information is not only received correctly and completely, but that it is understood.

During Project Execution, the Project Manager, Project Team, and Stakeholders will share information using a variety of communication mechanisms. These were defined during Project Planning and may include:

- ❑ Status Meetings
- ❑ Status Reports
- ❑ Memos
- ❑ Newsletters
- ❑ Executive Correspondence
- ❑ Meeting Notes
- ❑ Executive Meetings
- ❑ Steering Committee Meetings

This information is collected, stored and disseminated based upon procedures established and documented in the Communications Plan. While executing the plan, the Project Manager must be aware of how the organization will use the information, and whether the plan is effective. He/she must be flexible and ready to modify the plan if portions of it are not working as expected or communications needs change within the Performing Organization.

Of the many mechanisms available to the Project Manager, status reporting is particularly useful for communicating the performance of a project. Project Team members must complete *Progress Reports* providing regular feedback to the Project Manager. These reports can

serve a dual purpose – as a reporting mechanism to the Project Manager and also to the team member's immediate supervisor. Progress Reports should document detailed descriptions of actual work accomplished and include Team members' estimates of the effort they feel will be required to complete tasks. Progress Reports should also contain information regarding work to be done in upcoming weeks, and list any issues preventing completion of required tasks. When correctly completed by the Project Team, the reports are very useful to the Project Manager for updating the Project Schedule, and for anticipating issues and proactively planning ways for their resolution (See Appendix I / Template G - Progress Report).

Using the Progress Reports prepared by the Project Team, the Project Manager should complete a Status Report to be presented to the Project Sponsor. In this report, the Project Manager measures the "health and progress" of the project against the Project Plan. It is the primary communication vehicle between the Project Manager and the Project Sponsor, and should contain the following information:

- ❑ Summary of Progress to Project Schedule – a high-level glance at the major project deliverables, with their intended and actual start and end dates.
- ❑ Issues and action items – a running list of open and closed issues, including the name of the person responsible for taking action to resolve them (see Manage Issues, 4.2.8).
- ❑ Significant accomplishments – a list of the most important completed tasks, or a description of work done toward their completion.
- ❑ Significant planned accomplishments for the following weeks – a description of the most important tasks scheduled for completion during the following weeks.
- ❑ Deliverable acceptance log – a running diary of actions taken toward acceptance of deliverables (see Manage Acceptance of Deliverables, 4.2.7).
- ❑ Change control log – a running diary of actions taken toward acceptance of change control (see Manage Change Control Process 4.2.6).
- ❑ Lost time – a description of any situation that occurred that resulted in the Project Team being unable to perform work.

The Project Manager should determine the frequency of status meetings based upon the current state of the project and his/her good judgment. Weekly meetings may be sufficient during times of normal project activity, but during "crunch times" it may be necessary to gather more frequently. When a deadline is approaching and/or the Project Team appears to be under stress, consider holding a quick "sanity check" at the beginning of each day to ensure the team understands and remains focused on the important tasks for that day.

Other project documents that should be attached to the Status Report include any Change Control Requests, Deliverable Acceptance Forms, Meetings Notes, and the Risk Management Log.

The Status Report becomes the point of discussion for the Status Meeting, the regularly scheduled forum where the Project Manager presents the project status and discusses issues with the Project Sponsor.

The Project Manager should periodically assemble the Project Team to review the status of the project, discuss their accomplishments, and communicate any issues or concerns in an open, honest, constructive forum. These meetings are ideal opportunities for the Project Manager to gain insight into the day-to-day activities of Project Team members, especially if the team is large and individual interaction between the Project Manager and each team member is infrequent.

During the meeting the Project Manager should review the Project Schedule with the team and verify with each member the work that needs to be accomplished in upcoming weeks. Part of the meeting should focus on the team's Progress Reports, to verify estimates to complete tasks and to discuss issues that may impact estimates. The Project Manager can then use information communicated during the Project Team meetings as input to the Status Report.

Conduct a regularly-scheduled meeting with the Project Sponsor, using the Status Report to drive the agenda. If necessary, invite members of the Project Team who have expertise in a certain area you plan to discuss. Use the meeting time wisely – it is a great opportunity to have focused, dedicated time with your Project Sponsor and is the perfect forum for communicating the status of the project and planning ways to proactively resolve any issues or concerns.

Even though information is presented to the Project Sponsor at a summary level, it is very important to record and maintain ALL the detailed, supporting task-level information. Detailed information can be included as an appendix to your Status Report, or maintained in a separate document. Regardless of its location, detailed information should always be made available to the Project Team, and will be invaluable to you if your Project Sponsor requests clarification or more information.

The regularly-scheduled Project Team meeting is also a good forum to recognize individual accomplishments, and to reward team members for outstanding work.

On large projects where gathering the entire team is prohibitive, Team Leaders can assemble the appropriate Project Team members for meetings. It will then be necessary for Team Leaders to meet regularly with the Project Manager to ensure all communication lines remain open.

As documents are gathered and generated during Project Execution, the Project Manager is responsible for filing them in the appropriate location in the project repository. The repository must be maintained on a continuous basis, as it represents a history of the project, from its inception through closure. It will be used as a reference manual throughout the project and should, therefore, be made available to every member of the Project Team. At a minimum, the Project Manager should make sure the following repository items are always current:

- ❑ Project Schedule, including any project financials

- ❑ Status Report (see Appendix I, Template H)
- ❑ Team member Progress Reports
- ❑ Team member timesheets, if used
- ❑ Risk Management Log
- ❑ All correspondence, including any pivotal or decision-making memos, letters, email, etc.
- ❑ Meeting notes, results and/or actions

The project repository puts the history of the project at your fingertips, but only if it is kept up-to-date! It ensures project continuity even if the Project Manager gets promoted or reassigned.

### 4.2.10 Manage Organizational Change

During Project Planning, the Project Manager and Customer developed an Organizational Change Management Plan, taking into consideration the impact the product of the project will have on the Performing Organization.

During Project Execution, as the product is being produced, the Project Manager and Customer must evaluate the Organizational Change Management Plan documented during Project Planning to be sure it is still current. Because more information about the specific changes to the organization in terms of people, process and culture is known, it is quite likely that the plan will need to be adjusted and more details developed.

It is extremely important for the Project Manager and Project Sponsor to be actively involved in the change effort, and to proactively manage communications with the Performing Organization and Customers. As specific changes are implemented in advance of and in preparation for the final product of the project, all involved parties must be made aware of the anticipated timing of events to give them ample time to prepare and participate as required.

Managing Organizational Change should include:

- ❑ **People:** Planned workforce changes must be executed in careful coordination with, and usually at the direction of, the Human Resource department of the Performing Organization, and in conjunction with appropriate labor/management practices. Specific changes in job duties, staff reductions or increases, and any changes in the organizational structure itself should be performed in

accordance with the plan, and should include appropriate coordination and communication with union representatives and the external agencies involved. The Project Manager must work with these organizations to execute the changes as planned and scheduled, being sensitive to minimize any impact to them.

- **Process:** The redesign of existing business processes affected by the implementation of the product of the project, and the development of corresponding procedures, must be managed in coordination with product development. The redesigned processes and procedures must align with the product and associated changes. The implementation of the new processes, and any associated training or announcements regarding their introduction into the Performing Organization, must be integrated with the product implementation (to coincide with or precede the product, as appropriate). The Project Manager must manage these particular aspects of the schedule with diplomacy and tact. The active involvement of the Project Sponsor may be required as changes are implemented.
- **Culture:** Specific plans were developed based on the extent of the "culture shock" the product of the project was expected to introduce into the Performing Organization and its business strategy, established norms for performance, leadership approach, management style, approach to Customers, use of power, approach to decision making, and employee roles. Using the results of the assessment of the Performing Organization's "readiness for change," the Project Manager can develop more specific action plans to increase the organization's readiness and ability to adapt to the changes of the project. Most likely, these will include education and training events that can be targeted to specific audiences affected by the changes. The plans should provide information about the changes well in advance of implementation, so that affected Stakeholders have ample opportunity to express their concerns. To the greatest extent possible, the Stakeholders should be given a "preview" of how the product will actually work. They should also be given adequate training on how to adjust to change, how to work in the new environment, or similar "soft skills."

The Project Manager, with the active participation and support of the Customer and Project Sponsor, must be able to manage the specific activities that will adequately prepare the Performing Organization for the anticipated changes.

### 4.2.11 Manage the Project Team

In order to successfully meet the needs of a project, it is important to have a high-performing Project Team made up of individuals who are both technically skilled and motivated to contribute to the project's outcome. One of the many responsibilities of a Project Manager is to enhance the ability of each Project Team member to contribute to the project, while also fostering individual growth and accomplishment. At the same time, each individual must be encouraged to share ideas and work with others toward a common goal. The Project Manager, then, must be a leader, communicator, negotiator, influencer, and problem solver! The level of skills and competencies to successfully fill these roles helps distinguish good Project Managers from great ones.

To maximize the successful performance of the Project Team, the Project Manager must do the following:

#### Execute the Training Plan

During Project Planning, the Project Manager evaluated the skills of each team member to determine whether he/she met the current and future needs of the project. For each team member requiring training, the Project Manager established a Training Plan. The Training Plan includes the method by which each team member will be trained, and the corresponding training schedule. During Project Execution, the Project Manager must review the contents of the Training Plan to be sure they are still applicable to the project. If additional training is necessary, it should be added to the plan. If it is determined that planned training is no longer necessary, it must be removed from the plan. If new team members have joined the project since the Training Plan was established, the Project Manager must evaluate the skill level of the new members to determine if additional training is needed. In all cases, training tasks must be added to or removed from both the Training Plan and the Project Schedule, since they will affect the end date of the project.

As training takes place during Project Execution, the Project Manager should update the Training Plan with the names of the trainees and actual training completion dates. This information will be used to measure the success of the Training Plan, and enable the Project Manager to provide input for evaluating team members and preparing staff performance appraisals. In addition, the Project Manager should mark the corresponding Project Schedule tasks as complete.

### Allocate Work Properly and Ensure Accountability

A basic responsibility of the Project Manager is to assign work to the Project Team and ensure that the work is completed according to the Project Schedule. The Project Manager (or Team Leaders if the project is large) is responsible for allocating tasks to appropriate team members at the appropriate times. A good Project Manager establishes and maintains a Project Schedule that minimizes team member down time. Along with the Team Leaders, the Project Manager must continuously communicate to each member of the team what is required and by when, and then manage the performance of each team member in meeting the requirements.

Since the Project Manager is ultimately responsible for the success or failure of a project, he/she must direct Project Team endeavors and encourage team members to be accountable for their work. Accountability should be formally documented and measured through the use of team member Progress Reports (see Appendix I / Template G - Progress Report). But the Project Manager must also be willing to communicate face-to-face with the Project Team. Regular personal communication is one of the most effective ways to gather input on the status of project activities, discuss issues and concerns, recognize good work, encourage and provide support to team members who are struggling, and build relationships. It is also one of the primary ways to discover and take action to resolve team member performance issues.

### Establish a Team Environment

Project Team members must learn to work together to achieve project goals. They must recognize that there is more to teamwork than simply having team members feel good about each other. High-performing Project Teams are disciplined. Team members participate in all required meetings, are willing to suppress their egos for the good of the group, take their assigned tasks seriously, and continuously strive to improve their skills. High-performing Project Teams are either empowered to make decisions or are included in decision-making processes. This is the essence of project ownership.

Project Managers must develop sufficient management competencies to be able to create an environment that encourages team members to excel. The Project Manager may consider implementing some of the following:

- **Team-Building Activities** – these are actions taken specifically to improve the performance of the entire team. Activities can range from short items on a meeting agenda to extended, off-site

professionally facilitated sessions. However implemented, team-building activities provide opportunities for team members to improve their interpersonal and working relationships.

- **Team Recognition and Rewards** – these are actions intended to promote, encourage, and reinforce desired behavior or exceptional performance. Frequently they are initiated by individuals at management level, but they are also very effective when initiated by an individual's peer. In all cases, recognition programs must be documented clearly enough so team members understand what level of performance warrants an award.


Don't underestimate the power of a box of donuts or a celebratory cake when the team reaches a major milestone!

The primary objective for establishing an appropriate team environment is to improve overall project performance. When team members are encouraged to do their best and are motivated about a project, they are more likely to do whatever is necessary to improve their individual skills so they are more efficient and effective in performing their assigned activities. And when team members understand the importance of interacting with each other, they are more willing to identify and proactively deal with conflict. Resolving issues early leaves team members more time for producing actual project work.

**Manage Personnel Changes**

All organizations change. Personnel may transfer to different assignments or leave their employers, new individuals may be added to a Project Team or Customer organization, or the nature of the project may change, forcing a change in project responsibilities or reporting structure. A successful Project Manager has a plan in place to minimize the effect these types of changes may have on the outcome of the project or the morale of the Project Team. At a minimum, this plan should describe what to do when there are changes to the Project Team, but it should also discuss the actions to take if the Customers change. The process may be formal or very informal, depending on the size and needs of the project. In all cases, changes to the Project Team or Customer will most likely require updates to the Project Schedule.

### 4.2.12 Manage Project Implementation and Transition

During Project Planning, the Project Manager formulated and documented a plan for implementing or deploying the product of the project, and for transitioning the responsibility for the outcome of the

project from the Project Team to the Performing Organization. During Project Execution and Control, this Implementation and Transition Plan will be more fully developed as the product of the project is developed, and as specific activities in the plan are executed.

During Project Execution and Control, the Project Team will gain a better understanding of the impact the resulting product will have on the Performing Organization and Consumers. Activities begin that are required to prepare the Consumers to use the product, along with the tasks to prepare the Performing Organization to support it.

Managing Implementation and Transition includes:

- Monitoring and ensuring timely completion of all facilities issues, such as acquiring the necessary physical space, installing appropriate software, obtaining the appropriate building permits, etc.
- Coordinating Customer Acceptance Testing, including logistics of when and how Customers will test the product to confirm that it meets requirements before it is formally implemented and transitioned. Customer testing is one of the last opportunities for necessary changes to be identified and made to the product before rollout. Time for sufficient Customer testing and any resulting rework that will affect the Project Team must be incorporated in the Project Schedule.
- Managing the steps that need to be taken to ensure Consumers will be ready to use the product once it is implemented. These steps must be coordinated with the Organizational Change Management Plan, and will include training and orientation on the use of the product. Any training for Customers or Consumers must be provided according to the plan and coordinated with other aspects of the implementation of the product.
- Managing the detailed implementation. The Project Manager must monitor implementation activities and make any necessary adjustments. The implementation will vary depending upon the needs of the Performing Organization and the product of the project. Some implementations are "done" at the flip of the final switch, such as opening a new highway, or publishing a book. Others are phased into implementation, like installing an inventory management system module-by-module, moving to a new building floor-by-floor, or implementing a new business process location-by-location.

- Managing the steps that need to be taken to ensure the appropriate individuals are ready to support the product once it has been implemented and is in use. This may include negotiating with various internal organizations to determine the appropriate timing of the transition of responsibility, assigning specific organizations and individuals to support the specific products, and providing necessary training. The Project Manager must carefully manage the point in implementation that the Performing Organization takes responsibility for production problems, "help" or trouble calls, and for resolving the problems, and ensure that all pre-requisites for transition have been met – for example, performance standards, quality standards, etc.
- Coordinate with the Marketing Manager to ensure marketing is ready once the product is in production. This may not be applicable to all projects.
- Managing production of all necessary documentation. The Project Manager must ensure that all documents or records that will be provided with the product are produced. Examples of documentation include:
  - User manuals
  - On-line help
  - Assembly or usage instructions
  - Technical Manual

Overall, the Project Manager must be sure each required activity is carried out according to the Implementation and Transition Plan and schedule, and to immediately communicate any discrepancies to the Project Sponsor.

## 4.3 Gain Project Acceptance

### Purpose

The purpose of **Gain Project Acceptance** is to formally acknowledge that all deliverables produced during Project Execution and Control have been completed, tested, accepted, and approved by the project's Customers and the Project Sponsor, and that the product or service the project developed was successfully transitioned from the Project Team to the Performing Organization. Formal acceptance and approval also signify that the project is essentially over, and is ready for Project Closeout.

| **Roles for this Step** |
|---|
| Project Manager |
| Project Sponsor |
| Project Team Members |
| Customer Representative |
| Customer Decision-Maker |

### Tasks

#### 4.3.1 Conduct Final Status Meeting

Once the product of the project has been successfully transitioned to the Performing Organization, the Project Manager should prepare the final status report and conduct the final status meeting. The Project Schedule must be up to date for all completed project and project management lifecycle phases. This is the final opportunity for all participants to confirm that the product of the project has been successfully developed and transitioned. Any outstanding issues or action items must be transitioned from the Project Team to the Performing Organization.

| **Tasks for this Step** |
|---|
| Conduct Final Status Meeting |
| Gain Acceptance Signature from Project Sponsor |

#### 4.3.2 Gain Acceptance Signature from Project Sponsor

As the deliverables of the project are produced and accepted, approval signatures are gained from the Project Sponsor and Customer Decision-Makers. Following the final status meeting, the Project Manager must obtain the Project Sponsor's signature one final time, indicating acceptance of the project to date, and indicating approval to proceed to Project Closeout (see Appendix I / Template K - Project Acceptance

Form). If the Project Sponsor does not accept the project, he/she must indicate the specific reason(s) for rejection. The Project Manager is then responsible for resolving the issues and seeking the Project Sponsor's acceptance again.

## Project Execution and Control End-of-Phase Checklist

### How to Use

Use this checklist throughout Project Execution and Control to help ensure all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

**Figure 4-4 End of Phase Checklist**

| Item Description | Completion Date | Comments | Reason for not Completing |
|---|---|---|---|
| **Launch Project** | | | |
| Ensure team members have whatever is required to perform their tasks | | | |
| Meet with each team member to convey roles and responsibilities | | | |
| Distribute copies of all project materials and deliverables to all team members | | | |
| Hold orientation sessions for new members | | | |
| Review previous deliverables and components of Project Plan | | | |
| Schedule time and location of kick-off meeting | | | |
| Prepare materials for distribution at meeting | | | |
| Invite appropriate attendees | | | |
| Prepare meeting presentation and agenda | | | |

| Item Description | Completion Date | Comments | Reason for not Completing |
|---|---|---|---|
| Designate meeting scribe | | | |
| Conduct kick-off meeting | | | |
| Distribute meeting notes to all attendees | | | |
| Update the project repository | | | |
| **Manage Project Execution and Control** | | | |
| Update and analyze the Project Schedule as needed | | | |
| Conduct peer review of deliverables, if appropriate | | | |
| Implement quality checklists | | | |
| Conduct project health checks | | | |
| Manage the budget by monitoring financial performance regularly | | | |
| Update project repository | | | |
| Review identified risks with Project Team and Project Sponsor | | | |
| Re-evaluate each risk | | | |
| Update Risk Management Log regularly | | | |
| Execute contingency plans or modify them, if necessary | | | |
| Create new contingency plans to accommodate new risks | | | |
| Update project repository | | | |
| Execute change control process when necessary | | | |
| Gain acceptance and approval of all deliverables | | | |
| Identify and resolve issues, escalating them if necessary | | | |
| Provide timely communications according to Communications Plan | | | |
| Prepare Project Status Report regularly | | | |
| Conduct status meeting with Project Sponsor regularly | | | |

| Item Description | Completion Date | Comments | Reason for not Completing |
|---|---|---|---|
| Ensure status meetings are being held with Project Team regularly | | | |
| Conduct training for support personnel | | | |
| Conduct training for Consumers | | | |
| Communicate rollout information | | | |
| Conduct training for Project Team members and update Training Plan | | | |
| Allocate and assign work to Project Team members | | | |
| Conduct team building activities | | | |
| Reward team members | | | |
| Manage Project Team member changes | | | |
| Manage changes to Customer's organization | | | |
| Acquire necessary physical space and equipment to support the product | | | |
| Transition product to Performing Organization | | | |
| Update the project repository | | | |
| **Gain Project Acceptance** | | | |
| Prepare final Status Report | | | |
| Prepare formal Project Acceptance Form | | | |
| Conduct final Status Meeting with Project Sponsor and present Project Acceptance Form | | | |
| Resolve any issues | | | |
| Gain final project acceptance signature from Project Sponsor | | | |

## Measurements of Success

The ultimate measurements of success for Project Execution and Control are the product acceptance by the Customer, and project acceptance by the Project Sponsor. Meanwhile, the Project Manager can still assess how successfully the project is proceeding through Project Execution and Control by utilizing the measurement criteria outlined below. Because the processes in this phase (between Kick-off and Acceptance) are iterative, continuous and concurrent, the measurements for these processes need to be taken at regular intervals – probably coincidental with project status meetings. More than one "No" answer indicates a serious risk to the eventual success of your project.

**Figure 4-5 Measurements of Success**

| Process | Measurements of Success | Yes | No |
|---|---|---|---|
| Launch Project | Did you receive confirmation from ALL Project Team members that they agree with their role descriptions, and that they understand and agree with the project objectives, risks and timetables as recorded in the kick-off meeting notes? | | |
| Manage Project Execution and Control | Do your team members agree that the estimates to complete for all open tasks are accurate? | | |
| | Has your team implemented any "lessons learned" from either the peer review or the project health check process? | | |
| | Is the Project Sponsor aware of the latest total current budget for the project? | | |
| | Is your schedule current? | | |
| | Have you adjusted the risk priority level for any risks on the Risk Management Log? | | |
| | Were all changes to the scope, schedule, cost or quality parameters of the project made with a signed Change Control Request? | | |
| | Have all deliverables been presented to decision makers with prior preview of the deliverable in progress? | | |
| | Is the deliverable approval cycle less than or equal to the period of time identified in the Acceptance Management Plan? | | |
| | Are all project issues recorded in the Issue Log in the Project Status Report? | | |
| | Is the Status Meeting being held as often as indicated in the Communications Plan? | | |
| | If any Customer Decision-Makers are consistently absent from the status meetings, have they designated a replacement? | | |

| | | | |
|---|---|---|---|
| | Are you confident that the organizational preparedness for the project is proceeding according to the plan you agreed to? | | |
| | Are your team members showing no lost time in their Progress Reports? | | |
| Gain Project Acceptance | Do you have a Project Acceptance Form signed by your Project Sponsor accepting the project? | | |

## Phase Risks/Ways to Avoid Pitfalls

Project Execution and Control is where the rubber meets the road. In the immortal words of Yoda, it's "Do! Or do not! There is no try.

"What are some of the key elements of Project Execution and Control that require the most attention? Not surprisingly, this phase has the most pitfalls and the most areas for consideration. The following table identifies processes and tasks which have pitfalls highlighted in this section.

**Figure 4-6 Importance of Project Execution and Control – Avoiding Pitfalls**

| Process | Task | Why is it important? |
|---|---|---|
| Manage Project Execution and Control | Manage Project Schedule | Schedule slippage is the most visible sign of a project in trouble. |
| | Manage Issues | "That malfunctioning little #@?*!, this is all his fault."<br><br>Maybe, maybe not. But it's still your responsibility to make sure the actual problem is fixed. |
| | Manage Acceptance of Deliverables | "Don't be too proud of this technological terror you've constructed."<br><br>Your product is only as good as your Customer thinks it is. |
| | Execute Communications Plan | "Don't get technical with me!"<br><br>Communicate with your Customers as you would have them communicate with you. |

| Process | Task | Why is it important? |
|---|---|---|
| Manage Project Execution and Control (cont.) | Manage Organizational Change/Manage Product Implementation and Transition | You may have created the most awesome product in the known universe, but what good is it if the organization is not ready to utilize it? |
| | Manage the Project Team | "Who's the more foolish... the fool or the fool who follows him?"<br><br>With some teams, it's hard to tell who's leading whom. Don't let that happen to you! |

**PITFALL #1 – YOUR SLIP IS SHOWING (OR YOU WISH YOU WERE A DAY LATE AND A DOLLAR SHORT!)**

OK, the unthinkable has happened. Your project is actually behind schedule. Every week, something seems to happen, something quite outside everyone's control. You analyze, advise, reason, plead – and yet here you are, adjusting your deliverable dates once again. And the worst part of it is, deep down you really don't know why or, more importantly, what you can do about it.

Well, there is no need to panic. After all, you can always turn to the wise old Project Manager in the office across the hall who is ready and willing to help you, right? No? Oh well, then, you can always panic.

But before you do, let's figure out what's wrong. There may be myriad reasons why the schedule slips, but some of them are much more likely to occur than others. Broadly speaking, the fault may lie not in our stars, but in:

- Our customers. They love to change their minds – all the time!
- Our teammates. They may not be prepared, or may not have "the right stuff."
- Our environment. We may be camouflaged for desert warfare, but find ourselves fighting through the swamp.
- Our selves. In the final analysis, the buck always stops with the Project Manager. So whatever is going wrong – it's probably your fault (at least for not managing it properly!).

Now let's tackle each problem in turn, starting with the most likely one.

**Problem:** Management shortcomings.

**Solution:** C3PO said, "It's against my programming to impersonate a Deity!" But many Project Managers try, or feel they ought to. The tough part is that Project Manager's failures tend to disguise themselves as something else. When the Project Manager does not apply the right methodology to requirements gathering, and does not apply the right discipline to documenting its outcome, the result may appear to implicate Customers. When the Project Manager does not set up the right Project Team structure, and does not apply the right discipline to delivering assignments to all team members, the result may appear to imply an incompetent Project Team. When the Project Manager does not select the right technology, or does not secure enough support from the Performing Organization, the result may appear to indicate an unfavorable environment.

But the odds are, when something is going wrong, you should "start with the man in the mirror and ask him to change his ways."

**Problem:** The requirements are not clear, or they are constantly changing.

**Solution:** Well, it takes no genius to realize that you can't hit a target you can't see or catch. But what can you DO about it? For starters, you need to figure out whether (a) the requirements were not defined clearly from the beginning or (b) the Customers keep changing their minds.

In the first case, you need to hit the brakes hard, and then redirect all resources at your command to re-define the requirements. Go back to the Customers, and re-confirm or figure out what it is they REALLY want. Since the original requirements gathering process obviously did not work, first you need to analyze the way you went about gathering, defining and documenting the requirements, and try to improve it this time around.

In the second case, you need to have a chat with your Project Sponsor. Explain that by not sticking to their agreement (you do have their signature accepting the requirements, right?) the Customers are jeopardizing the project in all its parameters (Cost, Scope, Schedule and Quality), and, as a result, the Project Sponsor has essentially three options: (1) stop the requirements dithering, (2) expand the Project Budget and Schedule to accommodate the process (warning: you will still need option 1 eventually!) or (3) cancel the project now (with small overruns) or later (with major overruns).

In either case, change control is key. As soon as you detect an increase in scope, even if you still don't know the full extent of it, you need to start the change control process. Remember that change control is not a bad thing; it's just a process to manage enhancements as well as risks and mistakes. Changes are often unavoidable, as in the case of legislative initiatives or technological advances, and change control serves as a mechanism to assure everyone is aware of and agrees to all deviations from the plan.

**Problem:** Project Team members don't produce.

**Solution:** First, check to make sure that the fault is not with the environment and/or management. It most probably is. But it just may be possible that your folks do not have the right skills, knowledge or tools to get the job done. Of course, that should be no surprise to you, and you should have had your team training plan going full swing, right? Well, nobody's perfect. The important thing to do is to separate what you can fix from what you can't. For example, if the folks do not have the right tools to do the job – that can be fixed, even if you have to go to the ends of the Earth to get them. Likewise, if the team members do not have the right knowledge – well, that can be fixed too, although by now it may be too late. But if you find that you are stuck with a turkey who just can't do the job, you have a bigger problem. The first thing to do is to try a variety of managerial approaches with the person. Everyone is different, and some people react to certain management styles better than others. But if after deploying your whole managerial repertoire the person still comes up short, the best thing to do is to consult with your manager, or another "seasoned" Project Manager, and understand how such situations have been handled in your organization in the past.

**Problem:** The project environment is not what you expected.

**Solution:** This problem can take one of two flavors. One, the Performing Organization may not be ready for your project, and is not providing you with the support infrastructure you require. Two, the technology you are trying to utilize is wrong, immature, or not properly implemented.

For the first eventuality, sound the alarms! This is when you need that Organizational Change Management Plan, and your Implementation and Transition Plan. You will need to have another one of those chats with your Project Sponsor. Explain how the team is doing all it can to deliver the product, but the support structure is failing you all around. Make

specific suggestions as to what you need, and how it could be accomplished.

For the second eventuality, you must make a quick decision whether the technology can be fixed, or needs to be replaced. Some technological advances sound great in concept, but are just not ready for prime time. Try to avoid "bleeding edge" technologies altogether, but if you do get entangled in one, be ruthless – going back and retracing your steps using an older, less sexy but more stable technology may pay off in productivity gains for the rest of the project, compared with slugging through the immature mire of somebody's half-baked product.

**PITFALL #2 – YOU DROP THE ISSUE BALL**

In the course of the project, many issues come up. By definition, issues have a potentially adverse impact on the project's CSSQ. Most of them are solved internally, within the Project Team, but some require actions or decisions on the part of other players with whom you may have little influence.

The important fact to remember is that project issues are the Project Manager's responsibility. No matter how clear you are in communicating the issue, no matter how little say you have in its resolution – it remains your responsibility. Identifying another person as a party who can resolve the issue does not abdicate your responsibility to follow it through. Even obtaining consensus that another agency unit should, or a promise that they would, resolve it does not remove your obligation to track the issue to a successful conclusion.

One of the most natural pitfalls is to assume that once you have successfully convinced everyone that someone else has to solve the issue, you are done. On the contrary! Because it is now out of your control, you must be all the more dogged in the pursuit of its resolution. Tell the responsible parties that you're not going away. Keep asking them what you can do to help get the issue resolved, but keep tracking their progress – or lack thereof – on your status reports. Use all the tools in the project Communications Plan to continuously shine light on the issue.

**PITFALL #3 – YOU FALL INTO THE PROJECT BLACK BOX**

**Scene 1** – You employ the latest facilitation techniques to extract all possible requirements from your Customers, even requirements they did not know they had.

**Scene 2** – Your team performs wonders to design the perfect product, exactly as the Customers requested, and works like the dickens to develop it exactly as envisioned.

**Scene 3** – You beam with pride as you deliver your masterpiece to an eager Customer.

**Scene 4** – You slink away in shame as the Customer continues to rant and rave about all the features that the product does not have even though they told you about them all along.

What happened? You "black-boxed" your project. The Customers saw you when you were gathering the requirements. Then you and your team went away into the project black box, and only came out in time to show the Customer the finished product. The problem is, things changed in the interim! The Customer cast of characters may have changed. The business conditions may have changed. The expectations may have changed. And you did not keep in synch. Worse, you did not keep your Customers in synch with your project. You just assumed that because you are giving your Customers exactly what they originally asked for, they would like it. But you know what happens when you assume.

The simple remedy for the black box phenomenon is keeping the Customers involved every step of the way. You should constantly show select Customers project deliverables as they are being developed. Not so they can change their minds but so they know what to expect on delivery. You certainly want to minimize the number of decision-makers who will accept and sign off on your deliverables (chasing signatures of more than a couple of people is a pain) but you want to maximize the number of people who review, or even preview your stuff.

### PITFALL #4 – YOU REMAIN INCOMMUNICADO

Once the project really gets going in Project Execution, it is very easy to focus internally – on Project Team dynamics, on technical challenges, on deliverables and schedules – to the exclusion of everything else; yet it is also important to pay attention to the externals. **After all, as Project Manager, you are the main link between the project cocoon and the big world outside.**

Executing all aspects of your Communications Plan is your responsibility, and nothing is more important than accurate and frequent status reporting. A Project Status Report is the most effective way for all Stakeholders to remain closely connected to and aware of the project's progress – and potential problems.

The two most important questions the Project Status Report must answer are:

1. What is the latest, best available estimate for the remaining work, and how does it compare with the schedule?
2. What issues have come up that may affect the project Cost, Scope, Schedule, or Quality, and what is being done about them?

These questions are far more important to the eventual success of the project, and to minimizing surprises along the way, than the usual dissertations on project status and enumerations of immediate tasks at various levels – not that the status report should not include them. But after collecting, analyzing and evaluating the status information, the Project Manager's job is to make decisions or suggestions regarding changes to be made – if necessary – to keep the project on track.

Of course, the best status report in the world will make no impact if there is no one there to hear it. A regularly scheduled status meeting, attended by as many members of the Project Team as practical, dedicated to a thorough review of the status report, is irreplaceable.

**PITFALL #5 – YOU CONFUSE DESIRE WITH ABILITY**

Your customers sincerely want what your project is developing. They demonstrated their desire for it by committing funds to the project; by allocating resources to the Project Team; and by devoting time to meetings, reviews, and other project-related activities. And yet they may be totally unprepared to actually make use of it, or even to implement it at all.

But whose fault do you think it will be when they realize their inability to utilize it? That's right, yours. So it is up to you to make sure that someone determines organizational readiness for the product or service, and that someone prepares for a smooth transition of the product from the Project Team to the Performing Organization. Notice that it does not say you have to do it – just that you have to make sure it gets done. And that requires including in the Project Plan that organizational readiness assessment and transition planning need to be done.

**PITFALL #6 – THEY BLINDED YOU WITH SCIENCE (OR TECHNOLOGY)**

There is no law that says that a Project Manager must be a master of whatever technology the project employs. Nevertheless, you will be called upon to manage numerous technical decisions on the project.

A frequent pitfall in those circumstances is over-delegating those decisions to the more technical members of the team, or accepting the recommendations of your technical experts on blind faith, both of which result in unacceptable loss of control. Instead, make the team explain the issue and alternative solutions to you. As a reasonably intelligent person, you should be able to understand the concepts by listening and asking questions. If, however, the technical folks can't explain to your satisfaction why they are advocating a certain position – watch out! It is indicative of a position dictated more by desire than by reason, or of poor understanding on the part of the supposed experts. Get a second opinion, and trust your own instincts.

**PITFALL #7 – THE ENDLESS APPROVAL CYCLE LEADS YOU BY THE NOSE**

You thought you were smart. You thought you were ready. You knew how finicky your Customer was, so you built into your schedule not one, not two, but three approval cycles – one for an informal pre-screen, one for a formal review, and the last one for formal approval. You built in time for re-work based on the review. You even indicated in your acceptance parameters that you were only willing to wait so many days for the approval. Yet here you are, a month and a half past the first scheduled deliverable – which your team presented right on time – and you still don't have the proper signatures on the approval form. What happened? Any of a number of things. You may be stuck in a never-ending fine-tuning cycle (that's like hanging a picture for your mother-in-law: "A little more to the left. No, that's too far! Back a bit to the right. Hmm… How about a little higher? No, that's too high!" etc., etc.) Or you may be chasing signatures in a circle, with every person telling you that he can't sign until the other person does (that's like trying to solve a problem with your PC: "Install an updated driver before we swap the modem" – "No, flash the chip set before we upgrade the driver" – "No, update the operating system first!" – "Looks like you need to replace the motherboard.") Or the exalted Grand Poobah of the Customer tribe may just be too busy to pay any attention to your puny little project.

But the common thread among all the possibilities is that you are just being too darned nice. You may have said that you would only allow five business days for deliverable approval, but what do you do after the five days expire? You may have asked for particular signatures on the approval form, but what do you do if the signatures do not appear?

You fight the approval war on two levels: tactical, and operational. Tactically, you should use two weapons: status report and change control. Highlight the acceptance cycle in your Status Report, and start

the change control process when your criteria are not met. Be tough, and insist on the rules being followed. And finally, from the operational perspective, you should just make such a nuisance of yourself that the approvers would sign anything rather than be pestered by you again.

## Frequently Asked Questions

**How can a Project Manager manage the Project Schedule if team members don't accurately report when they are behind?**

The key to accurate forecasting and precise reporting is the "Estimate to Complete" column on the Progress Report. The team members don't have to report that they are behind; you (and most likely, your team leaders) need to make sure that they come up with an accurate estimate to complete, and the math will tell you the rest. How do you know if their estimate is accurate? Unless you (or your team leader) are involved in the details of the task, and understand the technology used to perform it, you won't – the first time.

By next time, you will know the team member's bias – unbridled optimism (forecasting too little), gloomy pessimism (forecasting way too much) or random don't-have-a-clueism (forecasting erratically), so you can "guide" them to a better estimate and then hold them accountable for it.

The thing to remember is, you can't just take what you're given. You have to question the estimate to complete, you have to compare it with other tasks, and you have to get it to the point where all of you are comfortable with it.

**When I submit a deliverable for review and acceptance, I sometimes receive comments after the established deadline. In other cases, reviewers are identifying issues that should have been identified and resolved during prior reviews. What can I do to ensure that reviewers complete the process timely and thoroughly?**

What we are talking about is managing the acceptance of deliverables. Typically, an acceptance management process is developed during the planning phase and documents:

- The definition of "acceptance".
- The criteria that must be met for each deliverable to be considered "acceptable".
- The number and identity of Customers designated to be reviewers of each deliverable – typically reviewers are experts in the subject matter the deliverable covers.
- The number and identity of Customers designated to be approvers – approvers have the authority to sign the approval form, indicating acceptance.
- The number of business days in which deliverables must be either approved or rejected by the reviewers and approvers.
- The number of times a deliverable can be resubmitted.

- The escalation process that will be followed if a timely decision on approval or rejection of a deliverable is not met.

Having a process that includes this information is a great start, but what if the criteria are in place, but not being followed by the reviewers? If, in the planning phase, you suspect problems will occur, there are additional measures available.

You may choose to be very specific when authoring the escalation process by including wording such as, "If the review is not completed per the schedule, approval will be assumed."

To ensure the reviewer takes ownership of their responsibility, consider setting the expectation that with each new iteration of the deliverable, the reviewer is only allowed to comment on the modifications made since the last review. This is a strong stance, and should be reserved for those times when it is truly necessary. This expectation must be set with the reviewer upfront – prior to the first review of the deliverable.

In addition, the failure to follow the process could be a risk to scope, schedule, quality and/or budget. Consider identifying the failure to comply with the acceptance management process in the Risk Management Plan. Individuals seldom want to be identified as a contributor to "risk" as risks are typically reported to the Executive Steering Committee.

It is important to remember that there may be outside influences that are impacting the reviewer. For instance, the reviewers may not be completing their tasks because of other workload. You may be able to work with the reviewer's supervisor to reschedule other work. Basically, you cannot rely solely on the written plans. You must manage the plan and work with the reviewers to ensure success. Staying on top of the process will allow you to avoid surprises and give you the opportunity to rectify issues before they grow into problems.

# Chapter 5 - PROJECT CLOSEOUT

## Purpose

The purpose of Project Closeout is to assess the project and derive any lessons learned and best practices to be applied to future projects.

Project Closeout begins with a Post-Implementation Review. The review may start with a survey designed to solicit feedback on the project from the Project Team, Customers, Consumers and other stakeholders. Once feedback has been collected and evaluated, an assessment meeting is conducted to derive best practices and formulate lessons learned to inform future efforts. Ideally, the best practices and lessons learned should be stored in a centralized organizational repository, facilitating access and retrieval by managers of future projects.

Project Closeout ends with administrative closeout – providing feedback to Project Team members, capturing key project metrics, and filing all pertinent project materials into the project repository.

## List of Processes

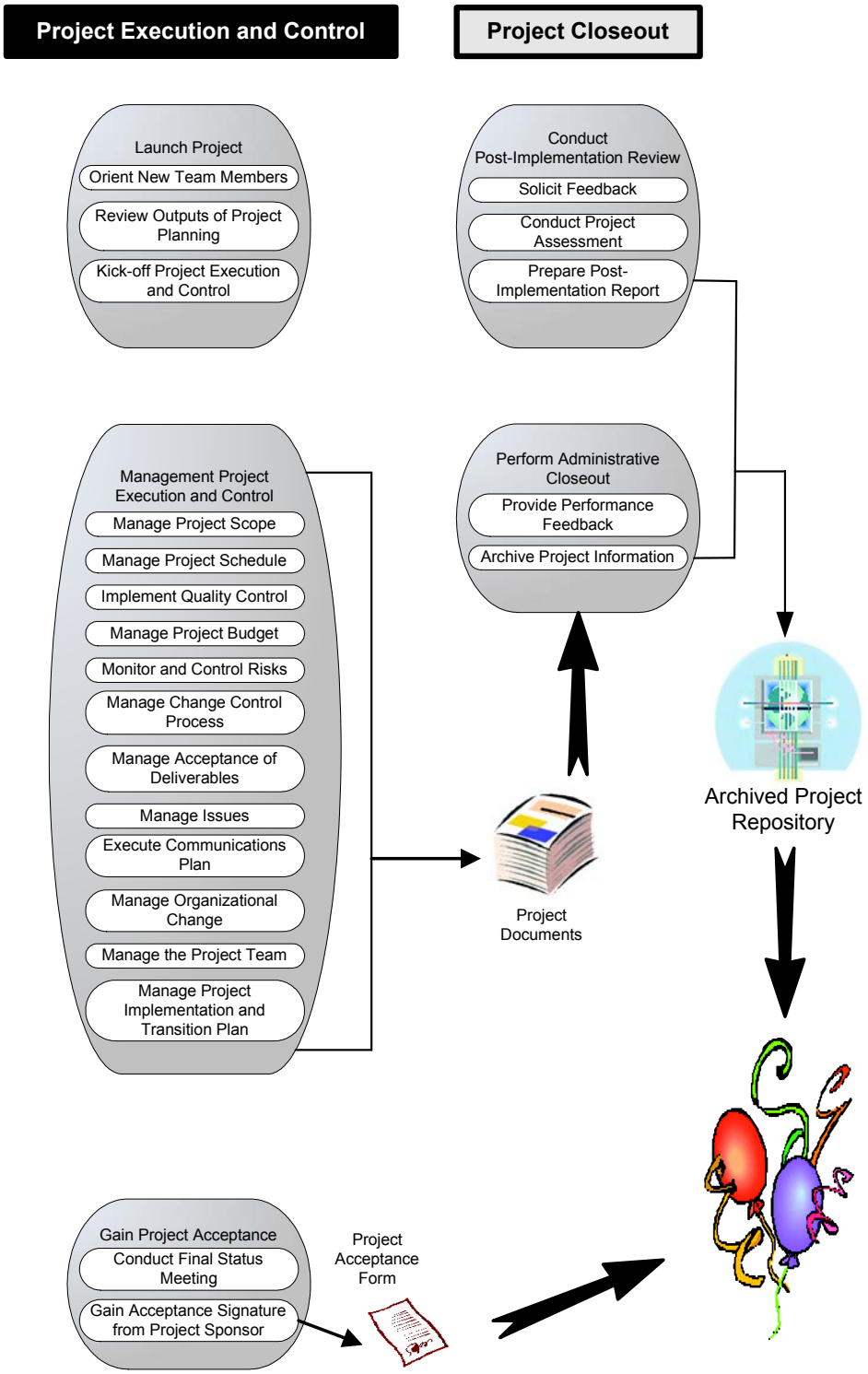
This phase consists of the following processes:

**5.1 Conduct Post-Implementation Review**, where the Project Manager assesses the results of the project by soliciting feedback from team members, customers and other stakeholders through the use of a survey to gather lessons learned, best practices and performance patterns or trends, and communicate those results in the form of a Post-Implementation Report.

**5.2 Perform Administrative Closeout**, where the Project Manager formally closes the project by providing performance feedback to team members, and archiving all project information.

The following chart illustrates all of the processes and deliverables of this phase in the context of the project management lifecycle.

**Figure 5-1 Project Closeout in the Project Management Lifecycle**



## List of Roles

The following roles are involved in carrying out the processes of this phase. The detailed descriptions of these roles can be found in the Section I Introduction.

- ❑ Project Manager
- ❑ Project Sponsor
- ❑ Project Team Member
- ❑ Customer
- ❑ Consumer
- ❑ Internal Stakeholders
- ❑ External Stakeholders
- ❑ Performing Organization Management

## List of Deliverables

The major outcome of this phase is the Post-Implementation Report, which formalizes the feedback received from all involved parties, and identifies best practices and lessons learned. The output from the tasks performed as part of conducting a Post-Implementation Review serves as the building blocks for the report.

Of even more importance is the transfer of lessons learned and best practices from the Post-Implementation Report to an organizational repository of project management data.

The final deliverable of this phase is the Archived Project Repository.

The following table lists all Project Closeout processes, tasks and their deliverables.

**Figure 5-2 Project Closeout Deliverables**

| **Processes** | **Tasks** | **Task Deliverables** ***(Outcomes)*** |
|---|---|---|
| Conduct Post-Implementation Review | Solicit Feedback | *Post-Implementation Survey* |
| | Conduct Project Assessment | *Project Assessment Meeting* |
| | Prepare Post-Implementation Report | Post-Implementation Report |
| Perform Administrative Closeout | Update Skills Inventory and Provide Performance Feedback | *Updated Skills Inventory*<br>*Performance Feedback* |
| | Archive Project Information | Archived Project Repository |

## 5.1 Conduct Post-Implementation Review

### Purpose

| Roles for this Step |
|---|
| Project Manager |
| Project Sponsor |
| Project Team Members |
| Customers |
| Consumers |

A project is considered complete when it has been successfully implemented and transitioned to the Performing Organization and approved by the Project Sponsor. At this point in the project management lifecycle, the responsibilities of the Project Manager are to assess how closely the project met Customer needs, highlight what worked well, learn from mistakes made during the project, identify patterns and trends, derive ways to improve upon processes executed throughout the project, and, most importantly, communicate results. The purpose of Conduct Post-Implementation Review is to gather the information required to meet those responsibilities, and to present the information in a Post-Implementation Report.

### Tasks

#### 5.1.1 Solicit Feedback

| Tasks for this Step |
|---|
| Solicit Feedback |
| Conduct Project Assessment |
| Prepare Post-Implementation Report |

The most important measures of the success of a project are whether the product was developed and delivered successfully and how well the needs of the Customers have been met. The most effective way to determine these measures is to Solicit Feedback.

The Project Manager should gather feedback using a survey appropriate to the project. Depending on the size and type of the project and the structure of the Performing Organization, different surveys may be required for different stakeholder groups, and surveys will need to be distributed to the appropriate individuals. At a minimum, feedback should be solicited from the Project Sponsor and Project Team members who performed the tasks in the Project Schedule. The Project Manager and Project Sponsor should determine if surveys should also be given to Customer Representatives, Consumers, or other stakeholders in order to collect sufficient information for assessing the success of the project in meeting its goals and their needs. The survey must also assess the outcome of the project and the performance of the Project Team and Performing Organization. The Project Manager must stress to all survey participants the importance of

their honest feedback as one of the primary mechanisms for assessing the project's performance.

It is very important to solicit feedback from the Project Team. Because they have a different point of view from that of Customers and Consumers, Project Team members provide an "inside look" at the way the project was executed. They are also an important resource for communicating lessons learned and best practices.

The written survey should be distributed, in either electronic or hard copy form, with a specific due date for its completion. The Project Manager should follow up if the survey is not returned on time. If distribution is extensive, it may be helpful to keep a list of to whom and when the survey was sent and returned.

The Project Manager also has the option of conducting a survey in person or over the telephone. An interview survey can often be more effective than a written one. While those responding to a written survey are limited to answering the questions as they are written, an intuitive Project Manager will be able to expand upon the verbal responses of the survey participant, gathering information that might otherwise not be uncovered. In some cases, however, participants may be reluctant to disclose information as honestly in person. The Project Manager may not be the appropriate person to administer the survey interview to some Stakeholder groups.

It is also important to obtain feedback on the performance of the Project Manager! The Project Manager's immediate supervisor, or an individual in a similar capacity, needs to take responsibility for obtaining honest feedback from the Project Sponsor, Customer, and Project Team.

Appendix I / Template L - Post-Implementation Survey, provides an example of a feedback survey. Each project is unique and questions should be tailored to address the specific project and the intended audience.

Once survey feedback has been collected, the Project Manager must review, analyze, and summarize the results for presentation at the Project Assessment Meeting.

The following is a suggested list of categories to use when compiling survey information:

- ❑ Product Effectiveness
- ❑ CSSQ Management
- ❑ Risk Management
- ❑ Communications Management
- ❑ Acceptance Management
- ❑ Organizational Change Management
- ❑ Issues Management
- ❑ Project Implementation and Transition
- ❑ Performance of Performing Organization
- ❑ Performance of Project Team

Summarized feedback will be used during the Project Assessment Meeting as a starting point for identifying lessons learned and best practices to use in future projects. It will also be included in the Post-Implementation Report created at the end of Project Closeout.

It is important to note that there is a difference between the success of the project and the success of the product. A project may come in on time, under budget, and meeting all defined quality standards. Every deliverable may have been 100% error free and perfectly consistent with the Project Scope. BUT, the Customer may still not be satisfied with the final product. It is important to assess why the customer is dissatisfied.

### 5.1.2 Conduct Project Assessment

The goal of this task is for the Project Manager to meet with members of the Project Team and stakeholder community to present the summarized results of the feedback surveys, discuss all other aspects of the completed project, gain consensus on what was successful and what was not, and derive best practices and lessons learned.

In addition to the Project Team, the Project Manager should consider inviting Project Managers from the Performing Organization with experience on similar projects. Based on experience and prior knowledge, other Project Managers can provide information and insight on the assessment process. It is a good idea for the Project Manager to distribute the summarized survey results to each participant in advance

of the Project Assessment Meeting, to allow them to come prepared to address the contents.

In order to provide the best possible products and services to Customers, Performing Organization Management must strive to continuously improve the way projects are managed and products are delivered. During the course of the assessment meeting, participants will consider the summarized feedback results and the experience of the Project Managers in attendance to discuss and assess the performance of the project. Based upon these discussions, the group will identify and agree upon lessons learned. These lessons will not only benefit the current Project Team, they will also help managers and team members of similar projects. The lessons may be positive or negative. Lessons learned must not simply be identified during the meeting. It is also important to document each one and develop an action plan describing when and how they might be implemented within the Performing Organization.

During the course of the project, the Project Manager, Customer, and Project Team members most likely recognized certain procedures that, when exercised, improved the production of a deliverable, streamlined a process, or suggested ways to improve standardized templates. Best practices are documented as part of the Project Assessment Meeting and later shared with other Project Managers so they can be repeated. In some cases, the outstanding "successes" might be translated into new procedures to be followed by future projects.

### 5.1.3 Prepare Post-Implementation Report

After the Project Assessment Meeting, the Project Manager prepares a Post-Implementation Report. In the report, the Project Manager distills information gleaned from the discussion and organizes it according to the feedback categories described above, adding information on key project metrics. The report documents the effectiveness of the product in meeting the needs of the Customer, the effectiveness of project management and the Project Team, how well the Performing Organization supported the project, lessons learned, best practices to be used in future projects, and the key project metrics that will enable the Performing Organization to compare success measures across projects. It also contains recommendations for improvement to be used by other projects of similar size and scope. (See Appendix I / Template M - Post-Implementation Report). During Perform Administrative Closeout, the report is archived in the project repository.

The Project Manager must present or distribute the Post-Implementation Report to members of the Performing Organization. In Performing

Organizations that undertake many projects, it is most effective to assign an individual or agency unit to take ownership of collecting and organizing the information, teaching the lessons learned, and implementing the best practices throughout the organization.

A central repository, owned and maintained by someone within your Performing Organization, provides a place where lessons learned and best practices can be archived for use by all Project Managers in the organization. Over time, as more and more information is added, it will become part of an invaluable knowledge base that, when leveraged, will translate into tremendous improvements on all projects!

**Projects identified as Large Projects by NDCC 54-59-19.1,3,6 are required to submit a Post-Implementation Report. Guidelines are available at http://www.state.nd.us/epm/oversight/index.html.**

**The North Dakota Enterprise Project Management Office would appreciate receiving a copy of the Post-Implementation Report for any project guided by this methodology. Agencies are also encouraged to share their reviews via the North Dakota Project Sharing System (PSS). Lessons learned and best practices from a variety of projects will contribute to the continuous improvement of this Guidebook.**

## 5.2 Perform Administrative Closeout

### Purpose

The purpose of Perform Administrative Closeout is to perform all administrative tasks required to bring the project to an official close.

**Roles for this Step**

Project Manager

Team Leaders

### Tasks

#### 5.2.1 Update Skills Inventory and Provide Performance Feedback

**Tasks for this Step**

Update Skills Inventory and Provide Performance Feedback

Archive Project Information

During the course of the project, Project Team members most likely enhanced their current skills or obtained new ones. The investment made in improving an individual's skills should not be lost. In order to leverage skills on future projects, and to facilitate and encourage

individual growth, the Project Manager should maintain a record of the skills developed and used on the project. If a skills inventory exists within the Performing Organization, the Project Manager or Team Leader must be sure each Project Team member takes the time to update it with any skills newly developed and any new project roles that were assumed. An up-to-date inventory will become invaluable to future Project Managers when attempting to appropriately staff their projects. It can also be used as input for an individual's immediate supervisor when providing performance feedback.

If no skills inventory exists within a Performing Organization, the Project Manager should encourage the Performing Organization to implement one. The inventory can be as simple as a hardcopy list, or as sophisticated as an electronic skills database, depending upon the needs and desires of the organization.

The Project Manager and/or Team Leader should also take the time to document their feedback on the accomplishments and performance of each Project Team member. As the person most aware of the day-to-day activities performed by the Project Team, the Team Leader or Project Manager is the most appropriate person to provide honest and accurate feedback. Feedback documentation should be prepared and reviewed with the individual team members first. Following this performance discussion, the documentation is submitted promptly to each Project Team member's immediate supervisor to be used as input to performance appraisals. The performance feedback mechanisms (appraisal forms, project exit interviews, etc.) specific to the Performing Organization should be used.

### 5.2.2 Archive Project Information

Throughout the course of the project, the Project Manager maintained a project repository. As the project progressed, the purpose of the repository was to create a central point of reference for all project materials to be used by anyone involved in the project. Once the project comes to an official close, the repository provides an audit trail documenting the history and evolution of the project.

During Project Closeout, the Project Manager should examine the repository to ensure that all relevant project-related material, documents produced, decisions made, issues raised and correspondence exchanged have been captured. In addition, the Post-Implementation Report should be included.

When the project is officially closed, the project repository should include the following materials:

- ❑ Project justification, including the Business Case and Project Proposal
- ❑ Project description/definition documents such as the Project Charter and Project Plan
- ❑ Any working documents or informal documents defining Cost, Scope, Schedule and Quality of the project
- ❑ Project Schedules – retain all copies electronically, but only include the baseline and final schedule in the hardcopy repository
- ❑ Project financials and supporting documentation
- ❑ Project Scope changes and requests log
- ❑ Project Status Reports
- ❑ Team member progress reports and timesheets
- ❑ Issues log and details (open and resolved)
- ❑ Project acceptance log by deliverable
- ❑ Project Deliverables, with Approval Forms and original signatures
- ❑ Risk Management Log
- ❑ Audit results, if encountered
- ❑ Correspondence, including any pivotal or decision-making memos, letters, email, etc.
- ❑ Meeting notes
- ❑ RFP's, evaluation plans, evaluation materials, and all related correspondence
- ❑ Contracts
- ❑ Other documentation specific to the product of the project (i.e. Testing plan and results)
- ❑ Final Project Acceptance Form, with original signatures
- ❑ Post-Implementation Report

A hard copy repository should be archived in a designated documentation area. It may be made available electronically at the discretion of the Project Sponsor in accordance with organizational records management policies. See Figure 5-3 Project Repository Table

of Contents for a suggested Table of Contents for your project repository. The organization and content of your actual repository may differ, depending on the scope and type of project and your personal preference.

**Figure 5-3 Project Repository Table of Contents**

| TABLE OF CONTENTS | |
|---|---|
| Project Proposal | Contracts |
| Business Case | Post-Implementation Survey(s) |
| Project Charter | Post-Implementation Report |
| Project Scope Statement | Change Control Forms |
| Project Schedule | Signed Approval Forms |
| Quality Management Plan | Meeting Notes / Minutes / Correspondence |
| Budget Estimate | Project Status Reports |
| List of Risks/Risk Management Log | Progress Reports |
| Description of Stakeholder Involvement | Project Work Products / Deliverables |
| Communications Plan | End of Phase Checklists |
| RFP | |

## Project Closeout End-of-Phase Checklist

**How To Use -** Use this checklist throughout Project Closeout to help ensure that all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

**Figure 5-4 Project Closeout End-of-Phase Checklist**

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| **Solicit Feedback:** | | |
| Prepare surveys | | |
| Distribute or review surveys with appropriate participants | | |
| Gather survey results | | |
| Review and analyze survey results | | |
| Summarize feedback for presentation at Project Assessment Meeting | | |
| **Conduct Project Assessment:** | | |
| Schedule Project Assessment Meeting | | |
| Select and invite appropriate meeting participants | | |
| Review and distribute survey summary results | | |
| Gather notes and meeting results for inclusion in Post-Implementation Report | | |
| Use survey feedback and meeting results to identify lessons learned and best practices | | |
| Document each lesson learned | | |
| Document best practices | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| Develop action plans to implement lessons learned and best practices | | |
| **Prepare Post-Implementation Report:** | | |
| Gather summarized survey feedback, notes from Project Assessment Meeting, lessons learned and best practices | | |
| Present or distribute report to Performing Organization Management | | |
| Distribute copy of report | | |
| **Update Skills Inventory and Provide Performance Feedback:** | | |
| Establish skills inventory system, if one does not exist | | |
| Update skills or add skills to inventory system for each Project Team member | | |
| Write performance feedback on each Project Team Member | | |
| Discuss performance feedback with each Team member | | |
| Forward feedback to team member's immediate supervisor | | |

| Item Description | Completion Date | Comments and/or Reason for Not Completing |
|---|---|---|
| **Archive Project Information:** | | |
| Gather all project information | | |
| Archive information in project repository | | |
| Locate hardcopy repository in designated documentation area | | |
| CELEBRATE!<br>Your project is complete! | | |

Insert a tip on where Large Projects and smaller projects post-implementation reports should be send or posted. (PSS)

## Measurements of Success

The ultimate measurement of success for Project Closeout will probably never be known. That's because it is impossible to assess now how much future projects will benefit from best practices and lessons learned derived from this project; the only thing certain is that no one will benefit at all if the best practices and lessons learned are not documented and communicated.

Meanwhile, the Project Manager can still assess how successfully the project is proceeding through Closeout by utilizing the measurement criteria outlined below. More than one "No" answer indicates a lesser probability that your experiences will help with the eventual success of other projects.

**Figure 5-5**

| Process | Measurements of Success | Yes | No |
|---|---|---|---|
| Conduct Post-Implementation Review | Was the survey presented in a way to encourage active participation? | | |
| | Were feedback results meaningful? | | |
| | Were best practices and lessons learned appropriately identified and documented in such a way as to facilitate their application to all types of projects? | | |
| | Did people read and provide feedback on the Post-Implementation Report? | | |
| Perform Administrative Closeout | Was all project information readily available and easy to consolidate in the project repository? | | |
| | Were you able to easily provide performance feedback on team members? | | |
| | Did you take the initiative to establish/recommend a skills inventory, if one did not exist within your organization? | | |

## Phase Risks/Ways to Avoid Pitfalls

Project Closeout may be perceived as the least important of all of the project phases, but its value to future projects cannot be underestimated. The knowledge gathered, the expertise developed, the lessons learned, the practices perfected – will remain locked temporarily in a few people's heads unless the Post-Implementation Review is conducted promptly, documented thoroughly, and (most importantly) its results are disseminated appropriately throughout the Performing Organization.

What are some of the key elements of Project Closeout that require the most attention? The Post-Implementation Review definitely stands out, and receives the most attention in the following table that identifies processes and tasks which have pitfalls highlighted in this section.

**Figure 5-6**

| Process | Task | Why is it important? |
|---|---|---|
| Conduct Post-Implementation Review | Solicit Feedback | Do you have to ask? Yes, if you want answers. Your opinion, no matter how lofty, is not enough. |
| | Conduct Project Assessment | "Honesty is such a lonely word." But that is what your project – and all future projects – need from you! |
| | Derive Lessons Learned | "Truthfulness…always seems so hard to give." But you owe it to yourself, and all other Project Managers that will follow in your footsteps. Learn from the bad things and leverage the good. |
| | Identify Best Practices | Here's your chance to highlight for posterity all the things you and your team did right! |

**PITFALL #1 – YOU WAITED TOO LONG TO GET FEEDBACK**

Your project is a success! Everyone is walking on air! In your joy and celebration, you neglect to solicit immediate feedback from the Project Team and other stakeholders….

Every project has its challenges, and everyone can learn from them. But people tend to forget the challenges they faced during the course of a project when the final outcome is a success. It is very important to solicit feedback as soon as Project Closeout begins so you get immediate, honest, and complete information regarding not only the project successes, but the failures. Then, the celebration can begin!

Suggestion: Start the lessons learned document at the beginning of the project. Document items as they are fresh in your mind.

**PITFALL #2 – YOU AREN'T SURE YOU ARE READY TO HEAR WHAT THEY REALLY THINK OF THE PROJECT**

**Scenario 1.** Your project was a miserable failure. Your team mutinied; your Customers hate you; and you are in big trouble with your boss because the project came in months late and way over budget. You want to put this wretched experience behind you. The last thing you want to do is dredge up all the misery again. Why give everyone yet another opportunity to kick you?

**Scenario 2**. Your project went OK. You had a pretty good team (with just a few nuts and bolts); you are still on speaking terms with your Customers; and the project was just a bit over, mostly because of someone who insisted on "just one more thing." You can probably even use this project as a resume-builder for future opportunities. So why jeopardize it by giving everybody a chance to bring up all the things that could have been done better? Let sleeping dogs lie!

**Scenario 3**. You are on top of the world. Your project was a success. The Customers love the product. Your boss nominated you for an award because you delivered the project on time and under budget. So why are you still afraid to find out what everybody thinks about the experience?

As you can see, whatever the outcome, the bias is always to "close the chapter" and move on. And yet, for your personal growth, for the benefit of your organization, and for all the other Project Managers to come, you need to spend the time to review the project. You need to understand what you did right – and what you did wrong. You need to know how your behavior, your approach, and your techniques, really worked – not from your own skewed perspective, but from the objective standpoint of your team, your Customers, and your management; if you think about it, from the only perspective that really matters, at least vis-à-vis your career.

**PITFALL #3 – YOU DECIDE TO PLAY FACILITATOR (OR SCRIBE)**

Since you are the one inviting the folks to your Project Assessment Meeting, and it is your project they are reviewing, the temptation is to try to facilitate the meeting yourself.

Bad idea for two reasons. First of all, you probably don't know how to do it right. A few Project Managers do happen to be talented facilitators; a lot more think they are, but in reality don't have a clue as to what's involved in getting meaningful output from a large group of disparate personalities. Remember, if you want a professional job, secure a professional. Many agencies have trained facilitators that are available

for such meetings. Alternatively, you may consider hiring an outside consultant if it can be done expediently.

Secondly, even if you are a great facilitator, what do you want to concentrate on during this meeting: analyzing what people say, or worrying about Loud Luther dominating the rest of the group with his diatribes? Remember what they say in the legal profession, "a lawyer representing himself has a fool for a client."

Likewise, it's a bad idea to play scribe, for the same reasons: you probably can't type as fast as people talk, and you should be worrying about the meaning of what people are saying, and not keeping up with Rapid Rita as she's rattling off sixteen reasons why you are such a rotten rascal.

**PITFALL #4 – YOU GET LOST IN THE FEEDBACK AND LEARN THE WRONG LESSONS**

If you overcome your fears and invite a good cross-section of the Project Team to the Project Assessment Meeting, and get a good facilitator to lead the session, you are going to get a lot of feedback – especially if, in preparation for the meeting, your facilitator asks the participants to list all the things that could have been handled better.

Making sense of all the feedback will be tough. Here are some guidelines:

First, concentrate on what's important. During the meeting, your facilitator should ask the group to prioritize their feedback, both positive and negative. What were the things that impeded the project the most? If there was a problem (corrected or not) with Cost, Scope, Schedule, or Quality – what contributed the most to it? The group should come to consensus on the top three or four or five things that affected the project the most. (How? That's why you get a professional facilitator!)

Second, select items that may be of use to other projects. If your locality had a flood for the first time in fifty years during the crucial phase of your project, and as a result your schedule got thrown off kilter, well, too bad for you – but nobody else really cares.

Third, "genericize" your experience so it can be applicable to multiple projects. If one of your key team members developed a rare tropical disease and as a result you had to scramble to identify and secure another resource who could do the work while the expert recuperated, the lesson learned is not how to treat the rare tropical disease, but how

to anticipate and prepare for the risk of a key member of the team being unavailable – for whatever reason.

**PITFALL #5 – YOU ARE TOO MODEST**

No matter how rotten everyone thinks you are at managing projects, you are guaranteed to have done at least something right (like reading this Guidebook, for example). So along with getting all the negative feedback at the Project Assessment Meeting, you also need to accentuate the positive. That is not difficult if your facilitator, in preparation for the meeting, asks the participants to list all the things that went right with the project.

Again, making sense of the feedback is possible if you follow the same guidelines: prioritize the comments, select those that are applicable to other projects, and make them generic and useful.

Don't be bashful about throwing things in that only you thought of. After all, who knows this project better than you? And be specific. If you came up with a better format for a progress report that suits your organization or your project circumstances to a "T" – include it, both as a template, and as a filled-in example. If you followed an unorthodox issue escalation procedure, but it worked better than the tried-and-true chain-of-command one, by all means, let the other folks have the benefit of your ingenuity and good fortune.

**PITFALL #6 – YOU LET IT ALL GO TO WASTE**

You complete a magnificent project, one that will be a feather in your cap for years to come. You survey half the world for their feedback. You hold a great Project Assessment Meeting, and come up with a host of brilliant strategies for other Project Managers to emulate, and a multitude of obstacles for them to avoid. You triumphantly record them all into your project repository, and file it away.

Never to be seen again.

That's because your organization does not have a way to disseminate this hard-won knowledge throughout the workplace. There is no central repository of historical project data. There is no agency unit charged with taking ownership to collect, organize and make available information about other projects. There is nobody assigned to actively teach lessons learned, or faithfully implement best practices.

There is no way to share organizational knowledge, other than by personal contact.

But it doesn't have to be that way. You can change that, and you can benefit greatly by doing it. First, start accumulating the knowledge from your own projects and from others you are aware of. Second, publicize what you are doing, and create a track record of successful utilization. Third, present the organizational knowledge repository idea to your management, and encourage them to take action. Someone at a management level needs to assign ownership to the appropriate individuals for implementing best practices and lessons learned throughout the Performing Organization. By then, the organization will have been exposed to the idea, will think it is fabulous, and will think you're fabulous for coming up with it.

And don't forget to share your knowledge with the ND Enterprise Project Management Office. Let others learn from your experiences while you benefit by learning from theirs. THEY WANT TO KNOW!!

**PITFALL #7 – COMPLETION IS ANTI-CLIMACTIC**

Your project ends successfully. People go their separate ways. You feel like the whole experience is now nothing more than a vague memory. Why? Maybe you didn't take the time to appropriately celebrate your success.

Don't be afraid to approach your Project Sponsor to inquire about funds that may exist for hosting a celebration function. The function may be as simple as a cake and coffee meeting, or may be an agency-sponsored party or event. In any case, you want your Project Team to have good memories of their experiences on projects you manage, so they will be excited about having the opportunity to work with you again.

Good luck, and have fun!

## Frequently Asked Questions

**Why should I write a Post-Implementation Report? Who's going to read it, anyway?**

Three reasons: because it's good for you, because it's good for your agency, and because it's good for project management everywhere!

Let's say the project did not go well. Do you want to repeat this sorry experience again, or would you rather avoid the same mistakes the next time? The only chance you have is by learning from experience, and allowing your organization to do the same.

Now let's say the project went OK. Don't you want to do better the next time? Enhance your career, earn the respect of your peers, etc., etc.?

Repeating what you did right this time will give you more opportunity the next time to concentrate on things you could do better.

Finally, let's say the project was a great success. Aren't you proud of your accomplishment? Don't you want everybody to know about it, and benefit from it?

For more information, see 5.1.2 Conduct Project Assessment.

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# APPENDIX I – FORMS/TEMPLATES

## Template A - Business Case

### Project Business Case

**Project Name:** _____

**Project Short Name:** _____

**Agency:** _____

**Business Unit/Program Area:** _____

**Type of Project:**

New Initiative
Major enhancement/upgrade
Application replacement
Ongoing Initiative

**Date:** _____

**Version:** _____

**Project Description:**
*Briefly describe the Project Objectives*

**Business Need/Problem:**
*Briefly describe the **Need** or **Problem** driving the proposed project and the identification of the Customers and anticipated Consumers of the project's product*

**Solution (as described in Proposed Solution):**
*Briefly describe the product of the project that would resolve the Business Need or Problem*

**Consistency/Fit with Organization's Mission:**
*Describe how the project is consistent with the agency's mission and/or strategic plan. Provide rationale if it is not.*

**Cost Benefit Analysis**
**Anticipated Benefits:**
*List all **Anticipated Benefits** resulting directly from the project. Specify the ways there will be measurable improvement of new capabilities and the implications of NOT doing the project – what benefits will be missed?*

**Cost Estimate:**
*Provide a **Cost Estimate** for the project. Include any special sources for project funding. Are there grants that will be applied for? Are federal funds available? Is a charge-back to the Customers planned? For example, the project may be funded by a specific line item in the budget.*

**Cost/Benefit Analysis:**
*Briefly justify the **Costs** for the identified **Benefits**. Include quantitative analysis, e.g., calculations of anticipated savings, costs avoided, Return On Investment, etc.*

**Project Risks:**
*Identify any risks associated with implementing this project and explain how the risks will be mitigated.*

# Template B - Proposed Solution

## Proposed Solution

Project Name: _____

**Summary of Business Need for the Project (from the Business Case):**
*Briefly summarize the Business Need or Problem*

**Proposed Solutions / Project Approach:**
*This section should include a description of the **Solution** being proposed and others that have been considered. Describe why this solution was selected instead of the others, and why the others were not. The decision should summarize the strategy that will be used to deliver the project and identify high-level milestones and dates. It is possible that a single solution cannot yet be recommended; in that case, indicate when – and how – the decision is likely to be made.*

| Alternatives Considered | Pros/Cons of this Alternative | Why chosen/not chosen |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**Budget/Resources:**
*Enter the **Estimated Costs** for each of the items listed, both **Initial**, during project development, and **Recurring**. Add any **important** relevant information under **Remarks**. Enter the **Resources/Personnel** estimated for the project and the number of hours required of each resource during the **Initial** project period, and then **Annually**.*

| **Estimated Costs:** | | | |
|---|---|---|---|
| Type of Outlay | Initial (Development) | Annual (Recurring) | Remarks |
| Hardware | | | |
| Software | | | |
| Supplies | | | |
| User Training | | | |
| Consultant Services | | | |
| Other: | | | |
| **TOTAL** | | | |
| | | | |
| | | | |
| **Estimated Resources/Personnel:** | | | |
| Internal staff hours | | | |
| Contracted services | | | |
| | | | |
| | | | |

**Additional Comments:**
*Enter any other information that may be important to the project.*

# Template C – Project Rating Matrix

AGENCY: PROJECT:

| **Relative Benefits** | **Range** | |
|---|---|---|
| Score all benefits from the following list. If a benefit does not apply, indicate N/A. | **Score** | **Score - C.M.** |
| A. **Return on Investment** – Actual revenue increases, savings or cost reductions due to an investment.<br>**Score:**<br>11-15 High financial benefit. Payback in 2 years or less.<br>6-10 Medium financial benefit. Payback in 3 to 5 years.<br>0-5 Little or no financial benefit. Payback greater than 5 years.<br>**Confidence measure (C.M.):**<br>0-2 A thorough ROI analysis has been completed. Estimates have a high degree of reliability.<br>3-5 Estimated benefits are documented. Investment and ongoing costs are documented with some specificity. A comparison of costs and benefits has been completed.<br>6-8 Costs and benefits are estimated with little specificity. Estimates are educated guesses. | | |
| B. **Customer Service** – Measurable improvements in service to customers.<br>**Score:**<br>11-15 A significant benefit to a majority of the customer base within 2 years.<br>6-10 A medium benefit affecting a portion of the customer base will be realized within 2 years with a majority of the customer base impacted in 3 to 5 years.<br>0-5 Little benefit or small customer base impacted during the first 5 years.<br>**Confidence measure:**<br>0-2 Customer demand for the improvement has been documented. Measurable customer service benefits have been identified and are aligned with the organization's mission and goals.<br>3-5 Customer service benefits have been identified without measures of success. The benefits are aligned with the organization's mission and goals.<br>6-8 Benefits are described with little specificity and may be unclear. Alignment with the organization's mission and goals has not been demonstrated. | | |
| Score all benefits from the following list. If a benefit does not apply, indicate N/A. | **Score** | **Score - C.M.** |

| | | | |
|---|---|---|---|
| C. | **Internal Efficiencies** – Measurable improvements in internal operation that do not necessarily result in tangible cost savings.<br>**Score:**<br>11-15 A significant benefit in terms of improved processing time, reallocation of staff time or other internal efficiency of high value based on the number of transactions, staff involved or other measure. Benefit will be fully realized in less than 2 years.<br>6-10 Medium benefit or value based on the scope of the change. Full benefit will be realized in 3 to 5 years.<br>0-5 Little benefit or value based on the scope of the change or full benefit will not be realized for more than 5 years.<br>**Confidence measure:**<br>0-2 Measurable benefits due to improvements in internal operations have been identified and are aligned with the organization's mission and goals.<br>3-5 Benefits due to improvements in internal operations have been identified without measures of success. The benefits are aligned with the organization's mission and goals.<br>6-8 Benefits due to improvements in internal operations are described with little specificity and may be unclear. Alignment with the organization's mission and goals has not been demonstrated. | | |
| D. | **Mandate** – Provide the ability to meet federal or state requirement to reduce the risk of legal non-compliance.<br>**Score:**<br>11-15 High benefit or cost/risk avoidance from compliance. Substantial additional penalties, political repercussion, litigation costs or loss of funds within the next 2 years.<br>6-10 Medium benefit or cost/risk avoidance from compliance. Additional penalties, political repercussion, litigation costs or loss of funds within the next 5 years are possible but not likely.<br>0-5 Little or no benefit or cost/risk avoidance from compliance. Penalties, political repercussion, litigation costs or loss of funds are unlikely in the next 5 years.<br>**Confidence measure:**<br>0-2 Specific mandated requirements have been identified along with measurable benefits or avoided costs resulting from compliance.<br>3-5 Mandated requirements have been identified but alternative solutions have not been identified and avoided costs or measurable benefits have not been documented.<br>6-8 General mandates have been identified but the impact is unclear. | | |
| E. | **Operational Necessity** – Provide the ability for an agency to continue to function in the case where business needs or technology changes have created an outdated system.<br>**Score:**<br>11-15 High benefit or cost/risk avoidance. Critical service reduction, outages or business changes affecting a large portion of the agency or customer base will occur within the next 2 years.<br>6-10 Medium benefit or cost/risk avoidance. Some service reduction, outages or business changes affecting a portion of the agency or customer base will occur within the next 5 years.<br>0-5 Little benefit or cost/risk. Minimal service reduction, outages or business changes are likely in the next 5 years. | | |

| | | |
|---|---|---|
| **Confidence measure:**<br>0-2 Specific service areas at risk and a measure of the impact have been identified along with measurable benefits or avoided costs resulting from implementation.<br>3-5 Specific service areas at risk and general impact have been identified but alternative solutions have not been identified and avoided costs or measurable benefits have not been documented.<br>6-8 A general business need or risk has been identified but the impact is unclear. | | |
| **Number of Benefits _____Sub-total Score** | | |
| **Average Benefit Score: Sub-total Score Divided by Number of Benefits** | | |
| **Highest Benefit Score** | | |

| **Enterprise Benefits** | **Range** | |
|---|---|---|
| For projects that benefit multiple agencies, add a bonus factor as follows: Indicate N/A if it does not apply. | Score | **Score - C.M.** |
| F. **Enterprise Benefit** – Duplication of technologies, costs or processes by multiple agencies will be eliminated or avoided.<br>**Score:**<br>4-5 The project represents an enterprise solution that will benefit most agencies.<br>2-3 The project represents a solution that will benefit several agencies with common processes or functions.<br>1-2 The project represents a solution that will benefit to at least 2 agencies.<br>**Confidence measure (C.M.):**<br>0 Agencies identified have committed to participate in the project or adopt the solution and overall benefits have been documented.<br>1 A number of key agencies have committed to participate in the project or adopt the solution.<br>2 Agencies identified have indicated an interest in participating in the project or adopting the solution. | | |
| **Total Average Benefit Score: Average Benefit Score Plus Enterprise Benefit Score** | | |
| **Total Highest Benefit Score: Highest Benefit Score Plus Enterprise Benefit Score** | | |

| **Relative Achievability – Financial Considerations** | Range | |
|---|---|---|
| | Most likely | **Not to exceed** |
| A. **Investment Cost** – Cost to implement the project along with a measure of the accuracy of the estimate.<br>**Estimated Investment Cost (Most likely):**<br>**IT budget request $_____ General funds ____% _____$**<br>**Other project costs $_____ General funds ____% _____$**<br>**Total project cost $_____ General funds ____% _____$**<br>**Confidence Measure:**<br>**Estimated Investment Cost Maximum $_____ General funds ____% _____$**<br>**(95% probability that cost will not exceed estimate without reducing the benefit.)** | | |
| **Funding Source: This represents the impact of the project on the general fund and the ability to leverage other sources.**<br>**General fund portion of investment** | | |
| B. **Ongoing Cost** – The cost to maintain the system on an ongoing basis represented as a change to the current cost of operation. A measure of the accuracy of the estimate is included.<br>**Estimated Ongoing Annual Cost Change (Most likely):**<br>**Change in operating cost $_____ General funds ____% _____$**<br>**Confidence Measure:**<br>**Estimated Operating Cost Maximum**<br>**Change in operating cost $_____ General funds ____% _____$**<br>**(95% probability that cost will not exceed estimate without reducing the benefit.)** | | |
| **Funding Source : This represents the impact of the project on the general fund and the ability to leverage other sources.**<br>**General fund portion of ongoing cost change** | | |
| **Total 5 year cost impact** | | |
| **Total Cost Score = Total 5 year cost impact / 100,000** | | |
| **Total 5 year cost impact to general fund** | | |
| **General Fund Score = Total 5 year cost impact to general fund / 100,000** | | |

| **Relative Achievability – Risk Factors** | **Score** |
|---|---|
| Score all risks from the following list.<br>A higher score indicates less risk or greater likelihood of project success due to the absence of risk factors. | |
| A. **Project Management Risk** – A rating that reflects the availability of an experienced project manager and the agency's ability to administer a large project.<br>**Score:**<br>4-5 The agency management has successfully executed IT projects of this size and complexity in the past. A sponsor and a project manager with experience on projects of this size and complexity have been identified.<br>2-3 The agency management has some experience with the successful completion of IT projects. A sponsor and a project manager with some experience have been identified.<br>0-1 The agency management has little experience managing projects. Project management will be outsourced, but the provider has not been identified and may be the vendor. A project sponsor has not been named. | |
| B. **Technology Risk** – A rating that reflects whether this project uses standard, mainstream technologies with which we have experience (low risk) or new, untried or poorly suited technologies (high risk).<br>**Score:**<br>4-5 A technology approach is planned that aligns with the enterprise architecture future state. The implementation team has experience with the technology.<br>2-3 An acceptable technology approach has been found. The technology has been implemented for this type of application in other states or other locations and appears to be viable for the foreseeable future.<br>0-1 A technology approach has not been planned or the implementation team has no experience with the technology. *Or* use of the chosen technology is diminishing to the point where replacement may be required before the benefits are realized. | |
| C. **Project Complexity** – A rating that reflects the size and complexity of the project. Projects that involve multiple organizational units, involve business processes that are complex or have not been automated previously would be higher risk. Projects involving a single organizational unit, a simple process or are a rewrite of system that is already automated to a large degree would be lower risk.<br>**Score:**<br>4-5 The project involves a single agency or process and will be completed by no more than two performing organizations. The tasks are well defined and can be completed in less than 9 months.<br>2-3 The project involves multiple agencies or multiple processes within an agency. Some design and process reengineering may be required to achieve the benefits. The tasks can be completed in less than eighteen months.<br>0-1 The project involves multiple processes across more than one agency or program. Significant design and reengineering of processes is necessary to achieve the benefits. Or the project will take longer than eighteen months to complete. | |

| | |
|---|---|
| D. **Parameters and Constraints** – A rating to quantify the availability of human resources to complete the project, scheduling constraints or political factors that may impact risk.<br>**Score:**<br>4-5 Adequate resources are available to the project with enough contingency in the budget and the schedule to allow for unforeseen risks. The project primarily impacts internal processes or non-critical customer services.<br>2-3 Resources appear to be adequate for the project. There is adequate time to meet any external scheduling constraints. The project may involve political commitments or customer impact but quality assurance tasks have been identified.<br>0-1 Tight deadlines have been imposed due to mandates or funding streams. Human resources to staff the project are limited or the financial commitment may not be adequate. The project has high visibility due to political commitments or customer impact and quality assurance tasks have not been identified. | |
| **Total Score** | |

# Template D – Proposal Decision Notice

**PROPOSAL DECISION NOTICE**

**Project Name:** _____

**Project Sponsor:** _____

**Proposal Decision**
*Put a checkmark in the **Indicator** box next to the decision made. Enter **Date** of decision. Make sure to fill out corresponding section below and forward back to **Project Sponsor**.*

❑ Project Proposal Approved
Target Date for Project Initiation Start:
Project Sponsor Assigned:
Project Manager Assigned:

❑ Additional Information is Required for Decision
Specific Additional Information Required:
Proposal re-submission date for the next Project Selection Cycle:
Other comments:

❑ Project Proposal Declined
Explanation of decision:
Screening results:
Evaluation results:
Prioritization/Selection results:

**Project Selection Committee Signatures**

| **Member Name** | **Signature** | **Date** |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

# Template E - Project Charter

**PROJECT CHARTER**

**Project Name:** _____

**Agency:** _____

**Business Unit/Program Area:** _____

**Project Sponsor:** _____

**Project Manager:** _____

**Project Background:**

*Explain the business need for the project and any events leading up to the project request. Describe any related projects that have or could have led to this project. Identify who has been involved, how they have been involved, and the current state of the project.*

**Project Scope**

*This doesn't need to be lengthy – just a short paragraph or some bullets explaining what is in scope OR what is not. (Example: This project will create an Internet presence for Unemployment Insurance Tax and Claims utilizing the current legacy system for data storage and processing. The scope includes… This project is not a rewrite of the Unemployment Insurance Benefits and Tax system.) This helps management to visualize what they are getting in short concise manner.*

**Project Objectives**

*Provide a list of at least five (5) **Project Objectives**. Objectives are quantifiable criteria that must be met for the project to be considered successful. Project objectives must include at least cost, schedule, and quality measures. Un-quantified objectives (e.g. customer satisfaction) entail high risk to successful accomplishment. In developing this list, consider that a business need may be addressed by multiple project objectives and the same project objective may address multiple business needs.*

**Required Resources:**

*List the names of all individuals needed to perform Project Initiation, and the estimated amount of time they will need to be committed to the project.*

**Constraints:**

*List any known factors that limit the project's execution. The most frequent **Constraint** is the project end date. For each **Constraint** listed, be sure to elaborate on how it is limiting the project and how the project would benefit from its removal.*

**Assumptions:**

*List the factors that, for planning purposes, are considered to be true, real, or certain. For example, if the date that a key person will be come available is uncertain, the team may assume a specific start date.*

**Project Authority:**

*This section of the Project Charter describes the levels of **Authority** to the project. It identifies who is involved with the project and their expected authority, who has the ability to resolve decision conflicts, and who will provide overall direction to project efforts. This section should contain, at a minimum, the roles and responsibilities of the Project Team and the Stakeholders. It should also identify any known governing body or steering committee to which the project is accountable and how they are accountable. An organizational chart may also be a helpful item to include in this section.*

***Optional Sections:***

*The Project Charter can also include a preliminary budget and schedule, a description of potential project risks, an organizational chart, and a communications plan. The important thing to remember is that the Project Charter is NOT the same as a Project Plan. It is designed to formally establish the project, and is a much more brief document than a Project Plan. It should be broad enough so it doesn't need to change.*

**Project Charter Approval**

Project Sponsor Name: Action: Approve: ☐ Reject: ☐

Comments:

Project Sponsor Signature: _____ Date: _____

*If the Sponsor is rejecting the charter, he/she must indicate the reason in the **Comments** field. The Sponsor indicates final acceptance of the Project Charter (including securing individual resources) by providing his/her signature on the **Project Sponsor Signature** line and the approval date on the **Date** line.*

**Agreement to Secure Required Resources**

Approver Name: Role:

Approver Comments:

Approver Signature: _____ Date: _____

*The approver is a member of Performing Organization Management. He/she indicates his/her agreement to provide required resources for the project by providing his/her **Approver Signature** and the approval **Date**. **NOTE:** Duplicate the Approver Information section on this template if more than one approval signature is required.*

# Template F – Project Kick-off Meeting Agenda

## Project Kickoff Meeting Agenda

**Project**
**Date**
**Time**
**From** _____ **To**: _____
**Location**

**Invitees:**
*List the names of individuals invited to the meeting.* ***Invitees*** *should include the Project Manager, Project Team, Project Sponsor, and any Customers with a vested interest in the status of the project.*
**Attendees:**
*During the meeting, note who actually attended.*

*Use the following suggested times as guidelines–the time you need to cover agenda topics will vary depending upon the needs of the project.*

**Introductions - Project Manager (5 min.)**
*Project Manager welcomes everyone and briefly states the objective of the meeting. Allow individuals to introduce themselves, and provide a description of their role within the Performing Organization and their area of expertise and how they may be able to contribute to the project efforts. The material to be presented by the following agenda topics should come right from the Project Charter.*

**Meeting Ground Rules - Project Manager (5 min.)**
*For example, one person talks at a time, speak to the agenda and topic, etc.*

**Sponsor's Statement - Project Sponsor (5 min.)**
*After brief introductions, the Project Sponsor should describe the vision for the project, demonstrate support, and advocate for its success, setting it as a priority for all parties involved.*

**Project Background and Purpose- Project Manager (5 min.)**

**Project Objectives - Project Manager (10 min.)**

**Project Scope & Schedule - Project Manager (15 min.)**

**Roles & Responsibilities - Project Manager (10 min.)**
*When reviewing roles and responsibilities be explicit about expectations relative to stakeholder availability and Project Sponsor commitment and support for the project.*

**Next Steps - Project Manager (5 min.)**

**Questions (10 min.)**

**ADDITIONAL INFORMATION:**
**Handouts**:
*Provide a list of the material to be distributed to the attendees. Be sure that one of the Project Team members in attendance is scribing for the session, capturing important project-specific information that requires further review or discussion as well as potential issues that could impact the project. The notes will be compiled into meeting minutes to be distributed to all the attendees and retained in the project repository.*

**Decisions**
*Document each project decision reached and its impact. Also indicate if the decision requires follow-up actions. If so, these should be captured below.*

**Issues**
*Document any project issues identified and its impact. Also indicate if the issue requires follow up actions. If so, these should be captured below.*

**Action Items for Follow-up**
*Capture any follow up activities and the individual responsible for them as well as set a date as to when the action needs/should be completed. At the end of the meeting, the scribe should recap the action items. These should also be included in the meeting notes to be distributed.*

# Template G – Progress Report

## Progress Report

To: Report Period Ending:
From: Project Name:

| The tasks I completed this reporting period are: |
|---|
| ❑ |

| The tasks I plan to complete next reporting period are: |
|---|
| ❑ |

| I lost time due to: (Specify hours and cause) |
|---|
| ❑ |

| **Issues:** | | |
|---|---|---|
| Description | Date Identified | Impact |
| | | |
| | | |
| | | |

| **Scheduled Vacation/Training:** | | | |
|---|---|---|---|
| Description | Start Date | End Date | # of Hours |
| | | | |
| | | | |
| | | | |

| **Time Reporting by Task:** | | | | | |
|---|---|---|---|---|---|
| Task ID | Description | Original Estimate | Hours this week | Estimate To Complete | Hours to Date |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | Reporting Period Total | | | | |

# Template H – Project Status Report

***Project Name*** ***Project Phase***

| | |
|---|---|
| **For period:** | ***Include a date range (i.e. September 1, 2004 – September 30, 2004)*** |
| **Submitted by:** | |
| **Green** | Strong probability the project will be delivered on time, within budget, and with acceptable quality. |
| **Yellow** | Good probability the project will be delivered on time, within budget, and with acceptable quality. Schedule, budget, resource, or scope changes may be needed. |
| **Red** | Probable that the project will NOT be delivered with acceptable quality without changes to schedule, budget, resources, and/or scope. |

## EXECUTIVE SUMMARY

| Status Item | Current Status | Prior Status | Summary |
|---|---|---|---|
| **Overall Project Status** | **Green** | **Yellow** | *Include a brief overall summary of the project for the reporting period.* |
| **Scope** | **Yellow** | **Red** | *Include an overall statement regarding any change in scope.* |
| **Schedule** | **Red** | **Yellow** | *Include a description of any variance in schedule.* |
| **Cost** | **Yellow** | **Green** | *Include a description of any variance in cost.* |
| **Project Risk** | **Green** | **Yellow** | *Include a description of any changes to the risk management log.* |

**Accomplishments:**
*Enter project accomplishments for the reporting period, identifying activities, meetings, and any deliverables produced.*

**Expected Accomplishments:**
*List project activities planned for the next reporting period.*

## RISK MANAGEMENT

| Status Item | Current Status | Prior Status | Summary |
|---|---|---|---|
| Project Risk | Yellow | Green | |

**Risk Management Log Summary**

| Risk # | Description | Response Plan | Owner |
|---|---|---|---|
| | | | |

Comments:

**Issues Log Summary**

| Issue # | Description | Required Action | Owner |
|---|---|---|---|
| | | | |

Comments:

## SCOPE MANAGEMENT

| Status Item | Current Status | Prior Status | Summary |
|---|---|---|---|
| Scope | Yellow | Red | |

**Change Control Log Summary**

| Change # | Description | Action Accept / Reject | Action Date |
|---|---|---|---|
| | | | |

Comments:

**Deliverable Acceptance Log Summary**

| Deliverable # | Deliverable Name | Action Accept / Reject | Action Date |
|---|---|---|---|
| | | | |

Comments:

## COST MANAGEMENT

| Status Item | Current Status | Prior Status | Summary |
|---|---|---|---|
| Budget | Red | Yellow | |

| Project Budget | Revised Budget (if applicable) | Expenditures to Date | Estimated Cost at Completion |
|---|---|---|---|
| $0.00 | $0.00 | $0.00 | $0.00 |

# Template I – Deliverable Acceptance Form

## Deliverable Acceptance Form

**Date:** _____

**PROJECT IDENTIFICATION**

Project Name: _____

Project Sponsor(s): _____

Project Manager: _____

*Enter the **Project Name**.*
*Enter the name of the **Project Sponsor(s)**.*
*Enter the name of the assigned **Project Manager**.*

**DELIVERABLE INFORMATION**

Project Phase: _____

Deliverable Name: _____

Author: _____

*Enter the **Project Phase**.*
*Enter the **Name** of the **Deliverable** being presented for approval and the **Author's** name. The author is identified as the person who identifies the acceptance criteria as having been met and forwards the deliverable for official acceptance by the sponsor.*

*If appropriate, information for multiple deliverables may be included for approval on a single acceptance form.*

**ACCEPTANCE CRITERIA**

Criteria:

*For each deliverable being presented, describe the Criteria that must be met in order for the deliverable to be considered acceptable. The text from the Project Plan can be used.*

Accept / Reject (If rejected, provide reasons below)

Signature: _____ Date: _____

*Type Name and Title below the signature line.*

Attachments: *List all attachments here*

# Template J – Change Request Form

## Change Request Form

**Project Name:** _____

**Request #:** _____

**Date of Request:** _____

**Requested By:** _____

**Request Description:**

**Reasons / Goals for Change:**

**Recommendations:**

*This area would include recommendations by the team that is bringing the change request forward. There is a potential for multiple recommendations for solutions based on analysis.*

**Impacts (Cost, Scope, Schedule, Quality):**

*For each recommendation, a narrative of the impacts to CSSQ should be included.*

**Solution:**

*This area would define the most appropriate solution to attain the desired objective. This is determined by the approving authority.*

**Approval Signature(s) and Date(s):**

*The project Manager will identify the appropriate approval body and forward for final approval.*

# Template K – Project Acceptance Form

## Project Acceptance Form

**PROJECT IDENTIFICATION**
Project Name: _____ Date: _____
Project Sponsor: _____ Project Manager: _____

*Enter the **Project Name**.*
*Enter the current **Date**.*
*Enter the name of the **Project Sponsor**.*
*Enter the name of the assigned **Project Manager**.*

**PROJECT SPONSOR INFORMATION**
Project Sponsor Name: _____
Action: Approve: __ Reject: __
Project Sponsor Comments:

Project Sponsor Signature: _____
Date: _____

*Provide the above information to the **Project Sponsor**. The Project Sponsor should either accept or reject the project and include any comments. If the Project Sponsor is rejecting the project, the reason for rejection must be provided. If the project is being approved, the Project Sponsor must sign the form and enter the **Date** approved.*

**PROJECT MANAGER INFORMATION**

_____
Name (Print)

_____ _____
Signature Date

*Once the project has been approved, the **Project Manager** should indicate agreement by providing a **Signature** and **Date**.*

# Template L – Post-Implementation Survey

**GENERAL INFORMATION**

Project Name: _____ Date: _____

Your Name: _____ Your Performing Organization: _____

Your Role on the Project: _____ Dates of Your Involvement: _____

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| **PRODUCT EFFECTIVENESS** | | |
| How well does the product or service of the project meet the stated needs of the Performing Organization? | | |
| How well does the product or service of the project meet your needs? | | |
| When initially implemented, how well did the product or service of the project meet the stated needs of the Performing Organization? | | |
| To what extent were the objectives and goals outlined in the Business Case met? | | |
| What is your overall assessment of the outcome of this project? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| **CSSQ MANAGEMENT** | | |
| How well did the scope of the project match what was defined in the Project Proposal? | | |
| How satisfied are you with your involvement in the development and/or review of the Project Scope during Project Initiation and Planning? | | |
| Was the Change Control process properly invoked to manage changes to Cost, Scope, Schedule, or Quality? | | |
| Were changes to Cost, Scope, Schedule, or Quality, effectively managed? | | |
| Was the established change budget adequate? | | |
| As project performance validated or challenged estimates, was the change control process used when appropriate and were challenges effectively managed? | | |
| How effectively was the Quality Management Plan applied during Project Execution? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| How effective was the quality assurance process? | | |
| How effective were project audits? | | |
| How effective was the utilization of Best Practices from prior projects in the Performing Organization? | | |
| **RISK MANAGEMENT** | | |
| How well were team members involved in the risk identification and mitigation planning process? | | |
| To what extent was the evolution of risks communicated? | | |
| How effectively was the Risk Management Log updated or reviewed? | | |
| How comprehensive was the Risk Management Log? (i.e. did many events occur that were never identified?) | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| **COMMUNICATIONS MANAGEMENT** | | |
| How effective were the informational materials available to orient team members? | | |
| How satisfied were you with the kick-off meetings you participated in? | | |
| How effectively were the project team meetings conducted? | | |
| How effectively and timely were Progress Reports provided by Team Members to the Project Manager? | | |
| How effectively were stakeholders involved in the project? | | |
| Was communication with stakeholders adequate? | | |
| How well were your expectations met regarding the frequency and content of information conveyed to you by the Project Manager? | | |
| How well was project status communicated throughout your involvement in the project? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| How well were project issues communicated throughout your involvement in the project? | | |
| How well did the Project Manager respond to your questions or comments related to the project? | | |
| How useful was the format and content of the Project Status Report to you? | | |
| How useful and complete was the project repository? | | |
| **ACCEPTANCE MANAGEMENT** | | |
| How effective was the acceptance management process? | | |
| How well prepared were you to accept project deliverables? | | |
| How well defined was the acceptance criteria for project deliverables? | | |
| Was sufficient time allocated to review project deliverables? | | |
| How closely did deliverables match what was defined within Project Scope? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| How complete/effective were the materials you were provided in order to make a decision to proceed from one project lifecycle phase to the next? | | |
| **ORGANIZATIONAL CHANGE MANAGEMENT** | | |
| How effectively and timely was the organizational change impact identified and planned for? | | |
| How pro-active was the Organizational Change Management Plan? | | |
| Was sufficient advance training conducted/information provided to enable those affected by the changes to adjust to and accommodate them? | | |
| Overall, how effective were the efforts to prepare you and your organization for the impact of the product/service of the project? | | |
| How effective were the techniques used to prepare you and your organization for the impact of the changes brought about by the product or service of the project? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| **ISSUES MANAGEMENT** | | |
| How effectively were issues managed on the project? | | |
| How effectively were issues resolved before escalation was necessary? | | |
| If issue escalation was required, how effectively were issues resolved? | | |
| How effectively were issues able to be resolved without impacting the Project Schedule or Budget? | | |
| **PROJECT IMPLEMENTATION & TRANSITION** | | |
| How effective was the documentation that you received with the project product/service? | | |
| How effective was the training you received in preparation for the use of the product/service? | | |
| How useful was the content of the training you received in preparation for the use of the product/service? | | |
| How timely was the training you received in preparation for the use of the product/service? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| How effective was the support you received during implementation of the product/service? | | |
| **PERFORMANCE OF THE PERFORMING ORGANIZATION** | | |
| How effectively and consistently was sponsorship for the project conveyed? | | |
| How smooth was the transition of support from the Project Team to the Performing Organization? | | |
| Was there a qualitative difference in the level of support provided by the Project Team during implementation and by the Performing Organization after transition? | | |
| Did the Project Team adequately plan for and prepare the Performing Organization for its ongoing responsibilities for the product or service of the project? | | |

| Questions | Rating (1-3) | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|---|
| **PERFORMANCE OF THE PROJECT TEAM** | | |
| Overall, how effective was the performance of the Project Manager? | | |
| How well did the Project Team understand the expectations of their specific roles and responsibilities? | | |
| How well were your expectations met regarding the extent of your involvement in the project (effort time commitments etc.)? | | |
| How effective was each Project Team member in fulfilling his/her role? | | |
| How effective was team member training? | | |
| **GENERAL QUESTIONS** | | |
| Question Response What were the most significant issues on this project? | | |
| What were the lessons learned on this project? | | |
| What on the project worked well and was effective in the delivery of the product? | | |

| Questions | Comments (What worked well? What could have been done better? What recommendations do you have for future projects?) |
|---|---|
| What other questions should we have asked? What other information would you like to provide to us about this project? | |

# Template M – Post-Implementation Report

## Post-Implementation Report

**PROJECT IDENTIFICATION**

Project Name: _____ Date: _____

Project Sponsor: _____ Project Manager: _____

Report Prepared By: _____

Enter the **Project Name**.

Enter the current **Date**.

*Enter the name of the assigned Project Sponsor and Project Manager.*

*Enter the name of the individual who prepared the report.*

**CATEGORIES:** Categories of the report correspond to the categories in the Post-Project Survey.

For each category, the Overall Rating is the average of the ratings provided on completed survey forms for that category (1=Not at All, or Poor, 2=Adequately, or Satisfactory, 3=To a great extent, or Excellent)

**A. PRODUCT EFFECTIVENESS**

*Summarize how effectively the product or service met the needs of the Customer, Consumer, and the Performing Organization.*

*Highlight specific product performance metrics.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the project outcome, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

_____

Overall Survey Rating:

## B. CSSQ MANAGEMENT

*Summarize effectiveness of CSSQ Management throughout the project.*

*Highlight significance of approved changes to the original project scope, and how they were managed.*

*Compare the baseline versions of the Project Schedule and Budget to the final versions.*

*Describe discrepancies.*

*Summarize deliverables compliance with defined quality standards.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the CSSQ management process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

---

Overall Survey Rating:

## C. RISK MANAGEMENT

*Summarize effectiveness of Risk Management throughout the project.*

*Highlight significant identified risks that actually occurred, and the effectiveness of the mitigation plan.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Risk Management process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

---

Overall Survey Rating:

## D. COMMUNICATIONS MANAGEMENT

*Summarize the effectiveness of the Communications Plan developed for the project.*

*Highlight significant communication activities that were particularly effective.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Project Communications process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

Overall Survey Rating:

## E. ACCEPTANCE MANAGEMENT

*Summarize effectiveness of Acceptance Management throughout the project.*

*Highlight significant deliverables and the effectiveness of the Acceptance Plan for those deliverables.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Acceptance Management process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

Overall Survey Rating:

## F. ORGANIZATIONAL CHANGE MANAGEMENT

*Summarize effectiveness of Organizational Change Management throughout the project.*

*Highlight significant Change Management impacts and the effectiveness of the Organizational Change Management activities planned and executed for those impacts*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Organizational*

*Change Management process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

Overall Survey Rating:

## G. ISSUES MANAGEMENT

*Summarize effectiveness of Issues Management throughout the project.*

*Highlight significant issues and the effectiveness of the Issues Management process for those issues.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Issues Management process, or those wildly enthusiastic about it.*

*Were issues resolved before change control was needed?*

Overall Survey Rating:

## H. PROJECT IMPLEMENTATION AND TRANSITION

*Summarize effectiveness of the Project Implementation and Transition.*

*Highlight significant milestones of the implementation and transition, and the effectiveness of the activities planned and executed for those milestones.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the Implementation and Transition process, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

Overall Survey Rating:

## I. PERFORMANCE OF PERFORMING ORGANIZATION

*Summarize effectiveness of the Performing Organization within the context of this project.*

*Highlight significant responsibilities of the Performing Organization, and the effectiveness of the Performing Organization in accomplishing them.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the performance of the Performing Organization, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

Overall Survey Rating:

## J. PERFORMANCE OF PROJECT TEAM

*Summarize effectiveness of the Project Team within the context of this project.*

*Highlight significant responsibilities of the Project Team, and the effectiveness of the Team in accomplishing them.*

*Identify and discuss "outliers" – specific Stakeholder groups dissatisfied with the performance of the Project Team, or those wildly enthusiastic about it.*

*Identify and discuss specific issues.*

---

Overall Survey Rating:

## K. KEY PROJECT METRICS

### COST

*Percent difference between the final cost, final approved baseline cost estimate, and the original cost estimate.*

*Number of approved changes made to the original budget.*

*Number of "re-baselined" budget estimates performed.*

### SCHEDULE

*Number of milestones in baseline schedule.*

*Number of baseline milestones delivered on time (according to last baselined schedule).*

*Difference in elapsed time of original schedule and final actual schedule.*

*Difference in elapsed time of final baseline and final actual schedule.*

### SCOPE

*Number of baseline deliverables.*

*Number of deliverables delivered at project completion.*

*Number of scope changes in the post-planning phases.*

### QUALITY

*Number of defects/quality issues identified after delivery.*

*Number of success measures identified in the Business Case that were satisfied or achieved at project completion.*

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## APPENDIX II - PROJECT PLAN TEMPLATE

# Agency/Institution Name

<Logo>

# Project Name

# Project Plan

# Prepared by:

Name

Title

Division, Department

## Version Control

The Version Control section is optional but encouraged, especially for larger, more complex projects.

Once this document is formally approved, changes should be tracked and reviewed by the assigned individual in the table below:

| Date | Author | Change | Reviewed and/or Approved By |
|---|---|---|---|
| | | | |
| | | | |

## Executive Summary

The Executive Summary is an optional section for the project plan, and can be used for providing a summary of the information contained in the project plan.

## Introduction

The Introduction provides the foundation for the project plan by covering the purpose of the plan itself, the project's background and purpose, assumptions and constraints, the approach/methodology for managing and executing the project, the project's relationship to other systems/projects, and lastly, a list of related documents.

### Purpose of this document

The purpose of the Project Plan is to define the project scope, schedule, budget, and quality expectations of the project, and to provide a comprehensive strategy for managing the project.

### Background

This information can be transferred from the Background section of the Project Charter and updated as necessary.

### Project Purpose

Include the project justification and its relationship to the agency business / strategic plan. This could also include a summary description of the product of the project.

### Project Assumptions and Constraints

This information can be transferred from the Assumptions and Constraints section of the Project Charter and updated as necessary.

### Project Approach

This is an optional section and includes information about how the project will be managed and which project management approach/lifecycle will be used.

***Example:*** The method of project management to be used in this project is based on the Project Management Institute's Project Management Body of Knowledge (PMBOK) and the North Dakota Project Management Guidebook. Both methodologies are based on initiating, planning, executing, controlling, and closing processes to ensure that the project completes its objectives on

time and on budget, while meeting the quality expectations of the stakeholders.

**List of related documents**

| |
|---|
| This list would cover any other related documents and may include the project business case, the project charter, or an advanced planning document that is used to acquire federal funding. |

## Scope Management

Scope Management involves the identification of all the work required, and only the work required, to complete the project successfully.

### Project Scope Statement

The scope statement provides a documented basis for making future project decisions and for confirming or developing a common understanding of project scope among stakeholders.

The scope statement includes a summary of the project objectives and major deliverables (what's in scope and what's out of scope). This can also include a summary of any other systems or projects that might have a potential impact on this project. Project Objectives are the quantifiable criteria that must be met for the project to be successful. Project Deliverables are measurable, tangible outcomes of the project. Examples of deliverables include a contract, an analysis document, a design document, an implementation plan, and a transition plan.

### Product Description

The product description (or product *scope*) documents the characteristics of the product or service that the project was undertaken to create. The product description will generally have less detail in early phases and more detail in later ones as the product characteristics are progressively elaborated. The product description can be generated from the contract statement of work or requirements.

### Scope Control

Scope control is concerned with influencing the factors that create scope changes, determining that a scope change has occurred, and managing the actual changes when and if they occur.

The control of changes to the scope identified in this document will be managed through the Integrated Change Control procedure. These procedures include the use of Change Request Forms and the Change Control Log to identify and manage changes.

**Acceptance Management (Deliverable Acceptance Process)**

A standard deliverable acceptance form is available (see Index I, Template I – Deliverable Acceptance Form).

The acceptance of Project Deliverables will be tracked in the following table:

**Deliverable Acceptance Log**

| Deliverable Name | Sent for Review (Date) | Sent for Acceptance (Date) | Action and Comments (Accept/Reject) | Action Date |
|---|---|---|---|---|
| | | | | |
| | | | | |

## Time Management

Project Time Management includes the processes required to ensure timely completion of the project.

### Schedule

The chart below illustrates the high-level project schedule. To view the full schedule, refer to Project Plan Appendix I.

| Phase | Start Date | End Date |
|---|---|---|
| | | |
| | | |

### Schedule Control

When documenting schedule control, consider the following:

- Who has authority to make changes (at what level) and what steps to take when there are changes in authority due to project or organizational circumstances or when roles change
- How to analyze impact of schedule changes – reviewing other constraints such as scope, cost, risks, quality, customer service
- How often the schedule is monitored and updated
- Version control
- Schedule change approval process
- Steps for common situations such as resource removal
- Reporting on the status of the schedule (maybe just reference to Communications)
- Time sheet process

**Implementation and Transition Plan**

The implementation and transition plan discusses how to transition the project from the project team to the organization. It should include post-implementation activities, organizational change, and any plans for ongoing training.

## Cost Management

Project Cost Management includes the processes required to ensure that the project is completed within the approved budget.

### Budget

The chart below illustrates the high-level budget. For a detailed budget, refer to Project Plan Appendix II.

| Item | Income | Expenses |
|---|---|---|
| | | |
| | | |

Supporting Cost Estimates may also be part of the appendix The initial budget created for the Business Case may be used as an input to this process.

### Cost Control

When documenting cost control, consider the following:

- How to manage changes
- Cost variances
- How to use contingency funds, including spending authority
- How the contingency was calculated

## Quality Management

Project Quality Management includes the processes required to ensure that the project will satisfy the needs for which it was undertaken.

### Quality Control

Describe how you will monitor and manage the project according to relevant quality standards such as technical standards (e.g. coding/development standards). State the specific standards that the project must follow.

Describe the process that will be used for project health checks.

Consider including business process metrics in the quality management plan. Business process metrics helps to ensure that the project is meeting the objectives it was intended to accomplish.

Quality management plans should be specific to the type of project. For instance, when the project is information technology related, be sure to include the process for conducting quality reviews such as code walk-throughs.

Quality management plans may be formal or informal depending on the project and the organization.

## Integrated Change Control

Integrated change control is concerned with a) influencing the factors that create changes to ensure that changes are agreed upon, b) determining that a change has occurred, and c) managing the actual changes when and as they occur.

Changes to the project can impact a variety of areas including Cost, Scope, Schedule, and Quality. Changes to the project that impact one or more of these areas must be approved via the change control process. A change request template is available (See Index I, Template J – Change Request Form). Changes, whether pending, accepted, or rejected, will be tracked using the Change Control Log (See Project Plan Appendix VI).

Each project will have a differing level of complexity regarding change control. Smaller and medium sized projects may utilize a less formal process, whereas larger projects will develop sophisticated change control processes involving various levels of approval.

Once a change is accepted, it may be necessary to update the schedule, budget, scope, or quality management plans accordingly.

## Human Resources Management

Project Human Resources Management includes the processes required to make the most effective use of the people involved with the project.

### Team Directory

| Role | Name | Department | Phone Number | Email Address |
|---|---|---|---|---|
| | | | | |
| | | | | |

Provide a list of all team members on the project. For each team member, specify:

- Role on the project (e.g. project manager, stakeholder, etc.)
- Name
- Department
- Phone Number
- Email Address

Additional information may include;

- Percent of time allocated to the project

### Responsibility

The Responsibility section should identify the specific responsibilities assigned to each role.

*Example:*

Executive Steering Committee - The committee should contain key members necessary to ensure that all interests are met.

- Monitor Project Status
- Establish Priorities
- Provide Policy Direction
- Approve Project Team Member - Staff Increases
- Recommend Budget Increases
- Approve Major Scope changes
- Resolve major issues

**Organizational Chart**

The Organizational Chart for this project can be found in project plan appendix III.

An organizational chart is a graphic display of the project organization which shows relationships. It also communicates the project structure.

**Team Development Plans**

The following Team Development Plans can be found in Appendix IV.

- Training Plan
- Team Building Plan

Multiple plans may be developed for the project. Consider developing a training plan which may include training on tools or applications or may lead to the acquisition of other skills. Also consider developing a plan for team building activities. Note that these can be combined into one plan.

**Staffing Management Plan**

Although Staffing Management Plans are recommended for larger projects, any project can benefit from them. These plans show when and how people will be brought on and off of the project.

## Communications Management

Project Communications Management includes the processes required to ensure timely and appropriate generation, collection, dissemination, storage, and ultimately disposition of project information.

### Communications Management Plan

Depending on the size and complexity of the project, communications management may be informal or highly sophisticated. Regardless of formality, the communications plan should be incorporated into your overall project plan for the project and reviewed regularly. You will commonly see a communications plan represented in a table format with the following fields:

- The type (description) of the communication – status meetings, status reports, presentations, memos, newsletters, meeting notes, etc.
- To whom the communication will be given – senior management, team members, the project sponsor, etc.
- The facilitator of the communication – the project manager is the facilitator for most communications!
- The frequency of the communication – daily, weekly, monthly, etc.
- How the communication will be stored and what records retention requirements apply

If the Project is utilizing the Work Management System, a reference should be included in the project plan describing what information can be accessed via WMS.

It should be clearly stated which meetings required formal minutes and records retention.

| Description of Communication | Purpose | To Whom / Stakeholders involved | Frequency | From Whom Sender, Organizer, Facilitator | Storage / Retention |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

## Risk Management and Issue Management

Risk Management is the systematic process of identifying, analyzing, and responding to project risks. It includes maximizing the probability and consequences of positive events and minimizing the probability and consequences of adverse events to project objectives.

### Risk Management Plan

A Risk Management Log is located in Project Plan Appendix VII and covers the following points.

- Date Identified – The date the risk was identified.
- Status – Identifies whether the risk is potential, active, or closed.
- Risk Description – A description of the risk.
- Risk Probability – The likelihood that the risk will occur. See the "Evaluating Risk Probability" section of the below for possible values. In this category the descriptive words Low, Moderate, or High will be used.
- Risk Impact – The effect o the project objects if the risk event occurs. See the "Evaluating Risk Impact" section of the table below for possible values. In this category the descriptive words Low, Moderate, or High will be used.
- Risk Score – Reflects the severity of the risks effect on objectives. The risk score is determined by multiplying the risk probability and risk impact values. The intent is to assign a relative value to the impact on project objectives if the risk in question should occur.
- Risk Assignment – Person(s) responsible for the risk if it should occur.
- Agreed Response – The strategy that is most likely to be effective.
    - *Avoidance* – Risk avoidance entails changing the project plan to eliminate the risk or condition or to protect the project objectives from its impact.
    - *Transference* – Risk transference is seeking to shift the consequence of a risk to a third party together with ownership of the response. Transferring the risk simply gives another party responsibility for its management; it does not eliminate it.
    - *Mitigation* – Risk mitigation seeks to reduce the probability and/or consequences of an adverse risk event to an acceptable threshold. Taking early action to reduce the probability of a risk's occurring or its impact on the project is more effective than trying to repair the consequences after it occurs.
    - *Acceptance* – This technique indicates that the project team has decided not to change the project plan to deal with a risk or is unable to identify any other suitable response strategy.

- Risk Response Plan – Specific actions to enhance opportunities and reduce threats to the project's objectives.

| Risk Scoring Table | | | |
|---|---|---|---|
| | ***Impact (on cost, time, or scope)*** | | |
| ***Probability*** | **Low = .05** | **Moderate = .2** | **High = .8** |
| **High = 0.9** | 0.05 | 0.18 | 0.72 |
| **Moderate = 0.5** | 0.03 | 0.10 | 0.40 |
| **Low = 0.1** | 0.01 | 0.02 | 0.08 |

Additional information to be included in the Risk Management Plan could include;

- A description of how risks will be identified, analyzed, and monitored.
- A description of the difference between risks and issues.
- A reference to the change control process in the event that it is invoked.
- The escalation process.

**Issue Management Plan**

Issues differ from Risks because an Issue already exists; Risks are only a potential event. If a Risk occurs, it can become an Issue, and conversely, a new Issue can generate new Risks.

An issue is defined as a question or problem that, in order to be resolved, requires a decision by (include those individuals or bodies that will be identified as decision-makers in the Issue Management Log). An Issue Management Log is located in Project Plan Appendix VIII.

Additional Information to be included in the Issue Management Plan could include;

- Steps to follow once an issue arises.
  - Prioritization, Assignment, Analysis
- The escalation / decision process.

## Procurement Management

Project Procurement Management includes the processes required to acquire goods and services, to attain project scope, from outside the performing organization.

### Procurement Management Plan

This section should identify what will need to be procured for the project to be successful. This might include utilizing the RFP process, contract evaluation and development, and management issues related to vendors.

- What will be procured?
- How will it be procured?

State agencies should adhere to the policies and procedures established by OMB. Institutions of Higher Education must adhere to Policies and Procedures established by the University system and State Board of Higher Education.

# Project Plan Appendix

## Project Plan Appendix I – Project Schedule

## Project Plan Appendix II – Project Budget

## Project Plan Appendix III – Organizational Chart

## Project Plan Appendix IV - Team Development Plan(s)

## Project Plan Appendix V – Work Breakdown Structure (WBS)

The Work Breakdown Structure (WBS) is a deliverable-oriented grouping of project components that organizes and defines the total scope of the project. The WBS is historically in a graphic form, but an outline or list is also acceptable. Each item in the WBS is assigned a unique identifier. A description of each work component is often collected in a WBS dictionary. The WBS dictionary can also include other information such as schedule dates, staff assignments, and acceptance criteria.

| ID | Deliverable | Deliverable Description | Scheduled Date of Approval /Signoff | Actual Date of Approval /Signoff | PHASE in which the Deliverable will be provided | TASK in which the Deliverable will be provided | Entity with primary responsibility for Deliverable | Division(s) and staff member(s) that should approve/sign off the Deliverable |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

## Project Plan Appendix VI – Change Control Log

| Request # | Date of Request | Description | Area of Impact (C,S,S,Q) | Assigned To | Status Pending / Accept / Reject | Last Update |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

## Project Plan Appendix VII – Risk Management Log

| Risk ID | Date Raised | Status (Active, Potential, Closed) | Risk | Risk Probability L, M, H | Risk Impact L, M, H | Risk Score (Matrix) | Risk Assignment | Agreed Response (Avoid, Transfer, Mitigate, Accept) | Risk Response Plan (Required Actions and Contingency Plan) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

## Project Plan Appendix VIII – Issue Management Log

| Issue # | Date Raised | Issue Title Description | Comments | Assigned To | Actions Taken | Status | Last Update |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

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# APPENDIX III – PROJECT MANAGEMENT PROCESSES FROM PMI'S PMBOK

## Initiating

| Knowledge Area | Process | Inputs | Tools | Outputs |
|---|---|---|---|---|
| **5. Scope** | 5.1 Initiation | 1. Product description<br>2. Strategic plan<br>3. Project selection criteria<br>4. Historical information | 1. Project selection methods<br>2. Expert judgment | 1. Project charter<br>2. Project manager identified/assigned<br>3. Constraints<br>4. Assumptions |

## Planning

| Knowledge Area | Process | Inputs | Tools | Outputs |
|---|---|---|---|---|
| **4. Integration** | 4.1 Project Plan Development | 1. Other planning outputs<br>2. Historical information<br>3. Organizational policies<br>4. Constraints<br>5. Assumptions | 1. Project planning methodology<br>2. Stakeholder skills and knowledge<br>3. Project Management Information System (PMIS)<br>4. Earned Value Management (EVM) | 1. Project plan<br>2. Supporting detail |
| **5. Scope** | 5.2 Scope Planning | 1. Product description<br>2. Project charter<br>3. Constraints<br>4. Assumptions | 1. Product analysis<br>2. Benefit/cost analysis<br>3. Alternatives identification<br>4. Expert judgment | 1. Scope Statement<br>2. Supporting detail<br>3. Scope management plan |

| **Planning** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| | 5.3 Scope Definition | 1. Scope statement<br>2. Constraints<br>3. Assumptions<br>4. Other planning outputs<br>5. Historical information | 1. Work breakdown structure (WBS) templates<br>2. Decomposition | 1. Work breakdown structure<br>2. Scope statement updates |
| **6. Time** | 6.1 Activity Definition | 1. Work breakdown structure<br>2. Scope statement<br>3. Historical information<br>4. Constraints<br>5. Assumptions<br>6. Expert judgment | 1. Decomposition<br>2. Templates | 1. Activity list<br>2. Supporting detail<br>3. Work breakdown structure updates |
| | 6.2 Activity Sequencing | 1. Activity list<br>2. Product description<br>3. Mandatory dependencies<br>4. Discretionary dependencies<br>5. External dependencies<br>6. Milestones | 1. Precedence diagramming method (PDM)<br>2. Arrow diagramming method (ADM)<br>3. Conditional diagramming methods<br>4. Network templates | 1. Project network diagrams<br>2. Activity list updates |
| | 6.3 Activity Duration Estimating | 1. Activity list<br>2. Constraints<br>3. Assumptions<br>4. Resource requirements<br>5. Resource capabilities<br>6. Historical information<br>7. Identified risks | 1. Expert judgment<br>2. Analogous estimating<br>3. Quantitatively based durations<br>4. Reserve time (contingency) | 1. Activity duration estimates<br>2. Basis of estimates<br>3. Activity list updates |

| **Planning** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| | 6.4 Schedule Development | 1. Project network diagrams<br>2. Activity duration estimates<br>3. Resource requirements<br>4. Resource pool description<br>5. Calendars<br>6. Constraints<br>7. Assumptions<br>8. Leads and lags<br>9. Risk management plan<br>10. Activity attributes | 1. Mathematical analysis<br>2. Duration compression<br>3. Simulation<br>4. Resource leveling heuristics<br>5. Project management software<br>6. Coding structure | 1. Project schedule<br>2. Supporting detail<br>3. Schedule management plan<br>4. Resource requirement updates |
| **7. Cost** | 7.1 Resource Planning | 1. Work breakdown structure<br>2. Historical information<br>3. Scope statement<br>4. Resource pool description<br>5. Organizational policies<br>6. Activity duration estimates | 1. Expert judgment<br>2. Alternatives identification<br>3. Project management software | 1. Resource requirements |
| | 7.2 Cost Estimating | 1. Work breakdown structure<br>2. Resource requirements<br>3. Resource rates<br>4. Activity duration estimates<br>5. Estimating publications<br>6. Historical information<br>7. Chart of accounts<br>8. Risks | 1. Analogous estimating<br>2. Parametric modeling<br>3. Bottom-up estimating<br>4. Computerized tools<br>5. Other cost estimating methods | 1. Cost estimates<br>2. Supporting detail<br>3. Cost management plan |
| | 7.3 Cost Budgeting | 1. Cost estimates<br>2. Work breakdown structure<br>3. Project schedule<br>4. Risk management plan | 1. Cost budgeting tools and techniques | 1. Cost baseline |

| **Planning** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **9. Human Resources** | 9.1 Organizational Planning | 1. Project interfaces<br>2. Staffing requirements<br>3. Constraints | 1. Templates<br>2. Human resource practices<br>3. Organizational theory<br>4. Stakeholder analysis | 1. Role and responsibility assignments<br>2. Staffing management plan<br>3. Organization chart<br>4. Supporting detail |
| | 9.2 Staff Acquisition | 1. Staffing management plan<br>2. Staffing pool description<br>3. Recruitment practices | 1. Negotiations<br>2. Pre-assignment<br>3. Procurement | 1. Project staff assigned<br>2. Project team directory |
| **10. Communications** | 10.1 Communications Planning | 1. Communications requirements<br>2. Communications technology<br>3. Constraints<br>4. Assumptions | 1. Stakeholder analysis | 1. Communications management plan |
| **11. Risk** | 11.1 Risk Management Planning | 1. Project charter<br>2. Organization's risk management policies<br>3. Defined roles and responsibilities<br>4. Stakeholder risk tolerances<br>5. Template for the organization's risk management plan<br>6. Work breakdown structure | 1. Planning meetings | 1. Risk management plan |

| **Planning** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| | 11.2 Risk Identification | 1. Risk management plan<br>2. Project planning outputs<br>3. Risk categories<br>4. Historical information | 1. Documentation reviews<br>2. Information-gathering techniques<br>3. Checklists<br>4. Assumptions analysis<br>5. Diagramming techniques | 1. Risks<br>2. Triggers<br>3. Inputs to other processes |
| | 11.3 Qualitative Risk Analysis | 1. Risk management plan<br>2. Identified risks<br>3. Project status<br>4. Project type<br>5. Data precision<br>6. Scales of probability and Impact<br>7. Assumptions | 1. Risk probability and impact<br>2. Probability/impact risk rating matrix<br>3. Project assumptions testing<br>4. Data precision ranking | 1. Overall risk ranking for the project<br>2. List of prioritized risks<br>3. List of risks for additional analysis and management<br>4. Trends in qualitative risk analysis results |
| | 11.4 Quantitative Risk Analysis | 1. Risk management plan<br>2. Identified risks<br>3. List of prioritized risks<br>4. List of risks for additional analysis and management<br>5. Historical information<br>6. Expert judgment<br>7. Other planning outputs | 1. Interviewing<br>2. Sensitivity analysis<br>3. Decision tree analysis<br>4. Simulation | 1. Prioritized list of quantified risks<br>2. Probabilistic analysis of the project<br>3. Probability of achieving the cost and time objectives<br>4. Trends in quantitative risk analysis results |

| **Planning** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| | 11.5 Risk Response Planning | 1. Risk management plan<br>2. List of prioritized risks<br>3. Risk ranking of the project<br>4. Prioritized list of quantified risks<br>5. Probabilistic analysis of the project<br>6. Probability of achieving the cost and time objectives<br>7. List of potential responses<br>8. Risk thresholds<br>9. Risk owners<br>10. Common risk causes<br>11. Trends in qualitative and quantitative risk analysis results | 1. Avoidance<br>2. Transference<br>3. Mitigation<br>4. Acceptance | 1. Risk response plan<br>2. Residual risks<br>3. Secondary risks<br>4. Contractual agreements<br>5. Contingency reserve amounts needed<br>6. Inputs to other processes<br>7. Inputs to a revised project plan |
| **12. Procurement** | 12.1 Procurement Planning | 1. Scope statement<br>2. Product description<br>3. Procurement resources<br>4. Market conditions<br>5. Other planning outputs<br>6. Constraints<br>7. Assumptions | 1. Make-or-buy analysis<br>2. Expert judgment<br>3. Contract type selection | 1. Procurement management plan<br>2. Statement(s) of work |
| | 12.2 Solicitation Planning | 1. Procurement management plan<br>2. Statement(s) of work<br>3. Other planning outputs | 1. Standard forms<br>2. Expert judgment | 1. Procurement documents<br>2. Evaluation criteria<br>3. Statement of work updates |

| **Executing** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **4. Integration** | 4.2 Project Plan Execution | 1. Project plan<br>2. Supporting detail<br>3. Organizational policies<br>4. Preventive action<br>5. Corrective action | 1. General management skills<br>2. Product skills and knowledge<br>3. Work authorization system<br>4. Status review meetings<br>5. Project management information system<br>6. Organizational procedures | 1. Work results<br>2. Change requests |
| **8. Quality** | 8.2 Quality Assurance | 1. Quality management plan<br>2. Results of quality control measurements<br>3. Operational definitions | 1. Quality planning tools and techniques<br>2. Quality audits *(Project Health Checks)* | 1. Quality improvement |
| **9. Human Resources** | 9.3 Team Development | 1. Project staff<br>2. Project plan<br>3. Staffing management plan<br>4. Performance reports<br>5. External feedback | 1. Team-building activities<br>2. General management skills<br>3. Reward and recognition systems<br>4. Collocation<br>5. Training | 1. Performance improvements<br>2. Input to performance appraisals |
| **10. Communications** | 10.3 Information Distribution | 1. Work results<br>2. Communications management plan<br>3. Project plan | 1. Communications skills<br>2. Information retrieval systems<br>3. Information distribution methods | 1. Project records<br>2. Project reports<br>3. Project presentations |

| **Executing** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **12. Procurement** | 12.3 Solicitation | 1. Procurement documents<br>2. Qualified seller lists | 1. Bidder conferences<br>2. Advertising | 1. Proposals |
| | 12.4 Source Selection | 1. Proposals<br>2. Evaluation criteria<br>3. Organizational policies | 1. Contract negotiation<br>2. Weighting system<br>3. Screening system<br>4. Independent estimates | 1. Contract |
| | 12.5 Contract Administration | 1. Contract<br>2. Work results<br>3. Change requests<br>4. Seller invoices | 1. Contract change control system<br>2. Performance reporting<br>3. Payment system | 1. Correspondence<br>Contract changes<br>2. Payment requests |

| **Controlling** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **4. Integration** | 4.3 Integrated Change Control | 1. Project plan<br>2. Performance reports<br>3. Change requests | 1. Change control system<br>2. Configuration management<br>3. Performance measurement<br>4. Additional planning<br>5. Project management information system | 1. Project plan updates<br>2. Corrective action<br>3. Lessons learned |
| **5. Scope** | 5.4 Scope Verification | 1. Work results<br>2. Product documentation<br>3. Work breakdown structure<br>4. Scope statement<br>5. Project plan | 1. Inspection | 1. Formal acceptance |
| | 5.5 Scope Change Control | 1. Work breakdown structure<br>2. Performance reports<br>3. Change requests<br>4. Scope management plan | 1. Scope change control system<br>2. Performance measurement<br>3. Additional planning | 1. Scope changes<br>2. Corrective action<br>3. Lesson learned<br>4. Adjusted baseline |
| **6. Time** | 6.5 Schedule Control | 1. Project schedule<br>2. Performance reports<br>3. Change requests<br>4. Schedule management plan | 1. Schedule change control system<br>2. Performance measurement<br>3. Additional planning<br>4. Project management software<br>5. Variance analysis | 1. Schedule updates<br>2. Corrective action<br>3. Lessons learned |

| **Controlling** | | | | |
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| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **7. Cost** | 7.4 Cost Control | 1. Cost baseline<br>2. Performance reports<br>3. Change requests<br>4. Cost management plan | 1. Cost change control system<br>2. Performance measurement<br>3. Earned value management (EVM)<br>4. Additional planning<br>5. Computerized tools | 1. Revised cost estimates<br>2. Budget updates<br>3. Corrective action<br>4. Estimate at completion<br>5. Project closeout<br>6. Lessons learned |
| **8. Quality** | 8.3 Quality Control | 1. Work results<br>2. Quality management plan<br>3. Operational definitions<br>4. Checklists | 1. Inspection<br>2. Control charts<br>3. Pareto diagrams<br>4. Statistical sampling<br>5. Flowcharting Trend analysis | 1. Quality improvement<br>2. Acceptance decisions<br>3. Rework<br>4. Completed checklists<br>5. Process adjustments |
| **10. Communications** | 10.3 Performance Reporting | 1. Project plan<br>2. Work results<br>3. Other project records | 1. Performance reviews<br>2. Variance analysis<br>3. Trend analysis<br>4. Earned value analysis<br>5. Information distribution tools and techniques | 1. Performance reports<br>2. Change requests |

| **Controlling** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **11. Risk** | 11.6 Risk Monitoring and Control | 1. Risk management plan<br>2. Risk response plan<br>3. Project communication<br>4. Additional risk identification and analysis<br>5. Scope changes | 1. Project risk response audits<br>2. Periodic project risk reviews<br>3. Earned value analysis<br>4. Technical performance measurement<br>5. Additional risk response planning | 1. Workaround plans<br>2. Corrective action<br>3. Project change requests<br>4. Updates to the risk response plan<br>5. Risk database<br>6. Updates to risk identification checklists |

| **Closing** | | | | |
|---|---|---|---|---|
| **Knowledge Area** | **Process** | **Inputs** | **Tools** | **Outputs** |
| **10. Communications** | 10.4 Administrative Closure | 1. Performance measurement documentation<br>2. Product documentation<br>3. Other project records | 1. Performance reporting tools and techniques<br>2. Project reports<br>3. Project presentations | 1. Project archives<br>2. Project closure<br>3. Lessons learned |
| **12. Procurement** | 12.6 Contract Closing | 1. Contract documentation | 1. Procurement audits | 1. Contract file<br>Formal acceptance and closure |